Volume VIII, No

66

January, 12

SOAP

with which is included an

Insecticide & Disinfectant Section

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Insecticide & Disinfectant Section

Oil & Fat Section

Volume VIII

January, 1932

Number 1

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INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 83. Oil and Fat Section begins on page 71. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

«

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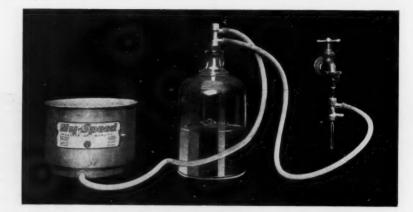
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SOAP

VOLUME EIGHT

NUMBER ONE

What of 1932?

THE soap business did not suffer from the general debacle of 1931 to anything like as great an extent as the average industry. For a greater part of the year, soap producers, large and small alike, held their heads up fairly well. During the last quarter of the year, however, numerous signs that the steadiness of the first nine months was weakening, became apparent. Where severe price cutting had been noticeable only on infrequent occasions before, reports of keener competition and sharp reductions became more numerous later in the year. The tendency to narrow down the differential between costs and selling price, and to follow the movement in raw material costs more closely, was quite obvious. Competition developed some rather unusual situations and sharp price slashing in a number of more or less localized fights for business.

Estimates of the loss or gain in soap production during the year brought wide variations in the guesses of those who would guess. A concensus of opinion as best we could gather it, would indicate that probably twenty per cent less soap was sold in 1931 than in 1930, and that the greatest proportion of the loss was distributed among the larger soap makers. Because of the innumerable forms in which soap is made and the diversity of channels into which it goes, blanket conclusions are dan-

gerous. However, it is our guess that all nationally sold brands of toilet soap, and bar, powder and flake laundry soaps lost business, that the sale of bulk tallow chip dropped materially, and that the loss in potash soap specialties and other specialties was inconsequential compared to the more common forms. Looking back over the year and considering it as a unit, we cannot do else but conclude, however, that the soap maker who did not make money in 1931, will never make money, and that he will have very little chance in the business over the next few years.

Looking ahead,—in spite of the fact that predictions of any and all kind seem to be in distinct disfavor right at this time,—a further narrowing of profit margins is not unlikely. Soap makers will probably find it harder to hold down raw material prices and even more difficult to advance soap prices should material costs require this. There seems to be a tendency toward an increase in the number of smaller plants doing a local business and the establishment of branch plants by small and medium size companies. Of course, higher raw material price levels might very quickly reverse a trend of this kind. On the whole, it would not be surprising to see some of the ills of general industry, which soap makers have escaped to a surprising degree during the past two years, injected into the soap business in 1932 as a result of a keener competitive situation.

Coconut Oil,—Excuse for Freedom

GITATION and loud talking for the A freedom of the Philippine Islands continues in Washington. The cry of freedom reverberates through the hallowed halls of the capitol. The politicians, having discovered the downtrodden people of the Philippines after these thirty years of American bondage, are intent upon righting the great wrong which this country did them when it took them over from the virtual slavery of the Spanish crown. Native Filipino freedom advocates are in Washington pleading their case, probably at the behest of American politicans whose "Philippine freedom consciousness" has suddenly developed such large proportions.

There seems to be little doubt that once a tariff were placed on Philippine coconut oil, sugar, and other produce, the agitation for freeing the Islands would peter out. Of course, it is generally known that the freedom cry is nothing more than a subterfuge of the dairy and farm interests to shut out Philippine produce from the American market. Nevertheless, with present upset economic conditions, and the wave of higher tariff rates which seems to be sweeping over the world, the Philippine situation in Washington is potentially more dangerous to consumers of coconut oil today than it has been at any time heretofore. The present might be the proper time for those manufacturers of soaps, liquid soaps, margarins, and allied products who have been watching from the sidelines, to join forces with other coconut oil consumers who are keeping their finger on the pulse of the Philippine situation in Washington.

Lower Wages

A READJUSTMENT of wages seems to have been quite general throughout the soap industry. In most cases, very little publicity has been given to the reductions. Nevertheless, they have been made. The wage scale, and the salary scale as well, has apparently settled down more or less quietly to levels from ten to twenty per cent under those which have ruled for the past few years. There is no doubt but

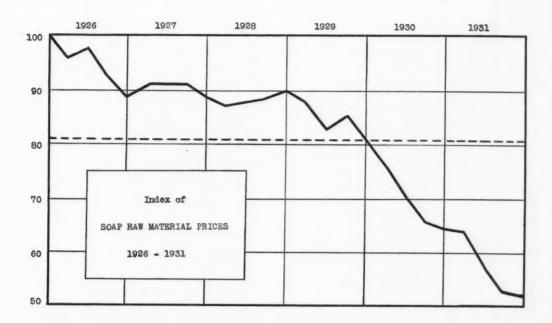
that the reductions have been necessary, even though as industries go today, the soap business is far better off than the average. The knife of competition has been sharpened to a razor edge during recent months. Manufacturers have been forced to give more for the money on the whole. The immediate outlook is certainly not for any great widening of the margin of profit. It appears rather the opposite. Although the cloud may be only a little blow, or may even pass many miles astern, it is best to reef sails, temporarily at least.

The complaint of our railroads that their only privilege today is to pay taxes, is very well founded. Trucks may come and busses may go, but rail travel and freight shipment are still the most important links in our system of carriers. Every shipment by rail is that much added to the badly-needed revenue of the American railroads. Every shipment taken away from the railroads weakens them just that much more,—and weak railroads are a menace to the industrial stability of any country.

"I have used one cake of soap for three months and it isn't nearly finished yet." This is a statement credited to Mahatma Gandhi on his recent visit to London. It is certainly a unique statement and it may account to some extent for that which is wrong with India. Who was it who once made the point that the progress of a nation can be judged by the extent of its soap consumption?

When things are going well, we are usually satisfied with our ability. When things go wrong, it is a human failing to look about for somebody to blame for the trouble. Witness the present case of the President of the United States.

Ten years from now, there are going to be some wealthy men in this country, the basis of whose wealth will be the low prices now prevailing and the nerve to buy what fools are throwing away in a hysteria of fear.



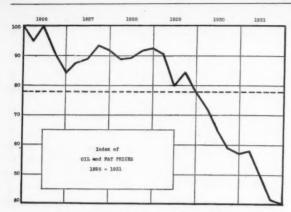
Soap Material Prices Dropped 20% in 1931

DEFLATION in commodity prices during 1931 was one of the most severe in history. The necessity of a readjustment of production costs to a steadily declining market found producers up against a stone wall of high priced inventories and high labor costs. Few were the commodities which did not sell throughout the greater part of the year at prices below actual production costs. Factory shut-downs were numerous and the growth in general unemployment was consequently large.

Soap raw material prices continued to plunge downward during 1931, falling approximately twenty per cent in the course of the year. Coming in the wake of the two preceding years of a similar although not so severe a price drop, the effect has been to reduce soap raw material costs to the lowest levels which have been seen since many years before the war. Current quotations on raw materials are little more than half what they were six years ago, and are approximately a third under the general average of prices for the past six years.

In the composite chart, shown herewith, on which has been recorded the average movement of soap raw material prices over the past six years, calculations are based on price movements of a representative group of thirty oils, fats, chemicals, essential oils and perfuming materials, weighted according to their relative importance. Since such a large part of soap makers' purchases consist of oils and fats, prices on this group are given special weight in making up the composite chart. The price level for January, 1926, is taken as the base or 100 point, and the indices for the other months express the relation of prices then prevailing to the January, 1926, level.

A study of the composite chart shows that only in one three-month period during the past three years has there been any other than a downward movement in soap raw material prices. The decline which started in January, 1929, was interrupted for a short period in the July to October period, but since then has continued without interruption. Only in the October-through-December period of the year just concluded has



Dotted line shows six year average.

there been even a slackening in the pace of the decline.

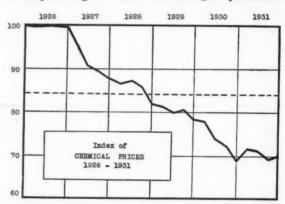
THE principal factor in reducing soap raw material costs to such a low level has been the remarkably severe drop in the price of soapmaking oils and fats over the past three years. As compared with January, 1926, base point of 100, oil and fat costs now stand at 40 as based on January, 1932, quotations. Present prices of oils and fats are thirty per cent lower than they were a year ago, when the index reading was 57. The oil and fat chart shows the same general characteristics as the composite chart, the principal feature being the steady decline since January, 1929, with the exception of the July-to-October period of that year.

The ten commodities used in making up the oil and fat price index were: coconut oil, corn oil, cottonseed oil, yellow grease, commercial olive oil, Niger palm oil, red oil, stearic acid, tallow and whale oil. Over the course of the year, every item in the list dropped in price, the decline ranging from ten to fifty per cent. The principal factor behind the downward market movement was the tremendous overproduction of whale oil last season. This, coupled with large crops of other oil-bearing materials and slackened demand resulting from lessened activity of industry, glutted the oil and fat markets of the world and forced prices down to levels which have not been seen before this century. At several points during the year, the market rallied slightly, but no substantial upward movement could be maintained in the face of the heavy stocks of oils which apparently must be absorbed before any sustained upward price movement can take place.

COCONUT oil opened the year with Manila coast tanks priced at 43/4c. pound, 2c. below the price for the same month of the previous year. Light copra arrivals during the early months of the year brought a slight advance in quotations during March and April. Lower

prices on copra caused a renewal of the downward movement in May and June, coast tanks going as low as 3\(^3\)4c. and copra to 2c. pound. The announcement of the Hoover debt moratorium caused a temporary rally in all commodity markets in July, but in the following two months, a continuation of the decline brought coconut oil to the lowest point it has reached in recent years. Copra went to 1\(^3\)4c. pound, and coast tanks of Manila coconut oil were quoted as low as 3c. pound at one point in October. Toward the year end, buying activity was stimulated by the unusually low prices, and active bidding for stocks caused an advance of a half cent a pound on oil. The January 1, 1932, figure was 3\(^1\)4c. pound.

Tallow went through a similar series of price movements. City extra opened the year quoted at $4\frac{1}{2}$ c. pound. It held around this level until June when a general decline of the whole list of soapmaking oils and fats brought quotations



Dotted line shows six year average.

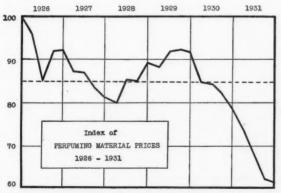
down to $3\frac{1}{2}c$. pound. The low point of the year was reached in September when prices fell to $2\frac{3}{4}c$. pound. As in the case of coconut oil this low figure attracted the interest of buyers and bidding through the month of November pushed the market quotations up to $3\frac{3}{4}c$. pound at the end of the year.

Corn oil was one of the few items in the oil and fat list to show any evidence of strength in the early part of the year, being held at 7c. pound through the first few months. Declines were noted in April, May and June, however, bringing the price to 51/2c. pound. General strength of commodity markets brought a one cent advance through July and August, but starting again in September lower prices were seen each month bringing the price down to 31/2c. pound at the beginning of the present year. P. S. Y. cottonseed oil was offered at 71/8c. pound at the beginning of the year. Minor fluctuations left this oil at about the same point at mid year. Severe recessions in commodity and security markets during the third quarter brought substantial declines, however, the low point being reached in October when P. S. Y. oil went to 3%c. pound. A moderate recovery was made in November, and on January 1, 1932, the ruling quotation was 4%c. pound.

THE chemical price chart was the only one of the group to indicate any advance over the past year. Alkali quotations were extremely low at the beginning of the year due to severe competition among sellers, bringing the January, 1931, index reading down to 69. A return to scheduled prices later in the year was responsible for the rise in the index reading, overbalancing the effect of lower prices which were later quoted on a number of other soap making chemicals. However it should be pointed out that quoted prices on alkalies and prices paid for deliveries against contract were two different things. The ten weighted items used in making up the index are: borax, fuller's earth, glycerin, caustic potash, pumice stone, rosin, caustic soda, sodium silicate, soda ash and trisodium phosphate. The index reading of the prices of these commodities stood at 70 on January 1, 1932, as compared with the January, 1926, base point of 100, and a six year average of 84.

The two principal features of the year's market for soapmaking chemicals were the price movements in alkalis and rosin. At the beginning of the year, the alkali market was in a badly disorganized condition. Quoted price schedules were not adhered to by manufacturers, the general attitude being to get business no matter what price cuts were necessary. After a short period of demoralization, some degree of stability was restored and a new and substantially lower price schedule was agreed upon. For a short time, it had been found necessary to withdraw quotations entirely until the market steadied.

The year proved to be another bad one for producers of gum and wood rosin. At the beginning of the year, WG gum rosin was priced at



Dotted line shows six year average.

\$7.85 a barrel. With the end of the producing season in April, higher prices were current due to the general belief that 1931 would see a substantial cut in rosin production. By June \$8.45 was reached in a moderate advance, but in July another decline set in due to the inability of the consuming market to absorb a crop which promised to be practically as large as the one of the previous year. Quotations on WG rosin broke to \$6.25 barrel in September. A moderate advance was recorded in November and as the new year opened, the market stood at \$6.80.

THE index of perfuming material prices dropped fifteen points during 1931, falling from a reading of 82 at the beginning of the year to 67 at the close. This continuation of the drop which got under way two years ago brought prices of perfuming materials down to a point substantially below the six year average which is figured at 85 on the accompanying chart. The index of perfuming material prices is based on the following ten products weighted according to their relative importance to the soap maker: oils anise, bergamot, cassia, citronella Java, cloves, geranium Bourbon, lavender, rosemary, terpineol and methyl salicylate. As in the other charts, prices for January, 1926, are taken as the base point.

As in the previous year, oil bergamot proved to be one of the most active of the essential oils. Several times during the year flurries were caused in this market by the report from Italy that the government plan of control was at last to become effective and that prices would be stabilized at substantially higher levels. net result, however, by the year's end was to reduce the price from \$2.40 to approximately \$1.90, as a stronger reaction always followed each advance when the reports from Italy were found to be baseless. Another active oil was anise which opens the year at 70c. pound, having dropped to this figure from \$1.00 a pound in January, 1930. During the past year steady declines have brought anise oil prices down to the current mark of 40c. Another happening of the year which stirred up considerable excitement in essential oil circles was the abrupt advance in oil geranium prices which followed the report of a destructive typhoon which was said for a time to have severely damaged the geranium oil crop on the Island of Reunion. This report which came through in April caused a sharp advance in prices, bringing both Algerian and Bourbon oil up to \$4.50 pound for a short time. When later reports minimized the damage, the natural reaction took place.

The political and economic developments in (Turn to Page 49)



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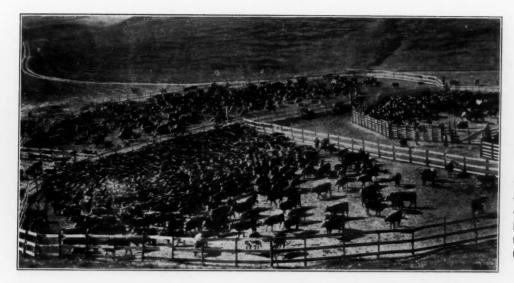
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Cattle supply 6.8% of the world's total output of oils and fats in the form of tallow compared to 5% for whale oil.

The Case of Whale Oil Versus Tallow

By E. L. Thomas

Specialist, Oils and Fats, Foodstuffs Division, Dept. of Commerce

NEW contender has entered the international arena of competition in oils and fats. "New" in the sense in which it is employed in this instance is a purely relative term, because whale oil, to which I refer, has been an article of commerce for eight or nine centuries at least but began to assume an aspect of importance and attract the close attention of producers and consumers alike of oils and fats only since the close of the late war. The advances made in the past twelve years have been truly remarkable in several different ways.

Perhaps the most striking change that has occurred in this period has been the substitution of floating factories for shore stations, and the small operations of rendering or trying out the blubber in open kettles on the decks of the old-time whalers. However, the latter method had been largely discarded in favor of shore stations by the time these in turn commenced to be superseded by the floating factories. (Of course, there are still a number of land units that are being conducted profitably especially in the Antarctic.

Australia and the southern and southwestern coasts of Africa). There is one such floating factory serving in the Antarctic capable of stowing 120,000 barrels or 45 million pounds of oil or a couple of million pounds more oil than the apparent consumption in the United States in 1924. This would be about the same quantity as 120 carloads of "city extra" or "packers' prime" tallow. During the 1930/31 season, there were also at least eight floating factories with a capacity of 80,000 barrels apiece and altogether 40 of these sea-going rendering plants in commission that season, according to "Register of the Whaling Fleet," with facilities for carrying upward from 17,000 barrels each. The steady expansion in whaling operations which would have made necessary a journey by the factory ships of many thousand miles to consuming markets at the peak of the season's activities brought about the conversion of a number of once-proud and palatial ocean liners into speedy auxiliaries for these floating factories. This type of vessel is equipped with

deep tanks so that it can relieve the floating factory of its accumulated production of whale oil and thus make it possible for the latter to carry on operations until the close of the season without the necessity of leaving the whaling field. These transports as they are called have another advantage in that they permit the whaling companies to spread out their deliveries of oil somewhat.

Whaling Now Centered in Antarctic

ALTHOUGH some whaling was carried on in the South Georgia and South Shetland fields just prior to the war, the major exploitation of the Antarctic came immediately after the war. In the fall of 1923, the "C. A. Larsen," a floating factory ship accompanied Admiral Byrd to the Ross Sea and remained to pass the season in those waters, thus opening up a new field in which the season's yield of oil rose from 17,299 bbls. in 1923-24 to 185,592 bbls. five season later. The area that has yielded the largest production in one season (exclusive of the past two seasons for which detailed data are not yet available) is the West Antarctic and the coast of Patagonia where the production was reported as 629,217 bbls. in the season of 1928-29. Contrast this with the season of 1925-1926 when only 17,184 bbls. were reported. Undoubtedly this very great gain can be attributed in part to a shift of the blue and fin species of whales, which supplied most of the catch, from other waters to this particular area. Incidentally whales are migratory in their habits and besides moving from the Antarctic each summer to breeding grounds in the coastal waters of South America, Africa and Australia, also may desert one area for another if their food, i.e., minute algae becomes scarce. This probably accounts for the presence of much greater numbers in the West Antarctic in the season of 1928-1929. (It would be well perhaps to explain that the "season" in the Antarctic usually opens the first of October, late March or early April generally winding up the activities of most of the companies. A short or summer season then ensues in the breeding areas with a much smaller complement of vessels operating. Figures whenever quoted should be understood to include both the winter season and that of the following summer.)

The Antarctic Ocean taken as a whole has provided a steadily ascending percentage of the world's catch of whales from 67% of the total in the season of 1919-1920 to slightly more than 90% for the past season (1930-1931). By way of comparison, it might interest some readers to know that since just preceding the Civil War in the heyday of the New Bedford whalers, we have dropped to a minor place as a whale oil producer with annual production about 10,000 bbls, the

bulk of it from whales taken in Alaskan waters.

Norway Has Largest Whaling Fleets

VESSELS engaged in whaling are registered under the flags of many countries including among others Norway, Great Britain, United States, Japan and Portugal. Norway is easily in the lead and Norwegian companies have supplied from 51% to 63% of the world's production during the past 12 years with an annual average of 57%. The activities of the Norwegian fleet center chiefly in the Antarctic as is shown by the fact that in the season of 1929-1930 only 89,000 bbls. out of a total of nearly 1,800,000 bbls. credited to Norway were produced in other fields.

At this point a few statistics are in order. The table below is based on official Norwegian government data and Bureau of the Census (U. S.) figures:

WHALE OIL

	WILLE	ULL	
		U.S.	
		Net Availabl	e
Year	World Production	for Con- sumption*	% of World Production
	(IN 1,000 PC	OUNDS)	
1920	152,748	23,845	15.6
1924	268,592	43,419	16.2
1926	432,207	58,860	13.6
1927	442,143	60,035	13.6
1928	494,735	66,209	13.4
1929	717,318	71,022	9.9
1930	1,081,613	61,568	5.7
1931	1,494,351	,	

*Imports and domestic production plus (or minus) change in position of stocks during year.

Production Expands 900% in 12 Years

THE world production of whale oil for the season of 1930-1931 represented approximately 5% of the total supplies of oils and fats in the world based on the latest available production data. Note from the table above that our estimated consumption in terms of percentage of world production apparently underwent a marked decline in 1929 and 1930 after remaining practically stationary for the years 1926-1928 inclusive. This was due of course to the greatly increased production of whale oil in the 1928-1929 and 1929-1930 seasons which was not accompanied by a correspondingly larger consumption in the United States. To prove this point, the following import figures are cited:

1920	1,339,000	lbs.	192954,532,000	lbs.
1924	38,057,000	46	193074,663,000	66
1926	63,434,000	66	1930 9 mos. 74,273,000	66
1927	39,750,000	66	1931 9 mos. 137,888,000	66
1928	68 386 000	46		

Actual consumption of whale oil in the United States during the present year will be considerably above 1930 if the net amount available for consumption during the first nine months can be regarded as an accurate criterion. For the period indicated last year, this was 47,601,000 pounds

and for the corresponding number of months of the present year 63,023,000 pounds. There is usually a very small importation of whale oil in the final quarter of the year, therefore, it may be assumed that imports up to the end of September of this year will be virtually the total arrivals for Receipts are heaviest during the the year. months of April-June inclusive which coincide with the termination of the Antarctic season. Imports up to September 30th this year were 137,888,000 pounds (a little over 9% of last season's production for the world). This was nearly twice as much as came in for the entire year of Stocks on September 30th were 132,-248,000 pounds which plainly indicates that much of this oil has not yet entered channels of consumption.

Plans for Restrictions

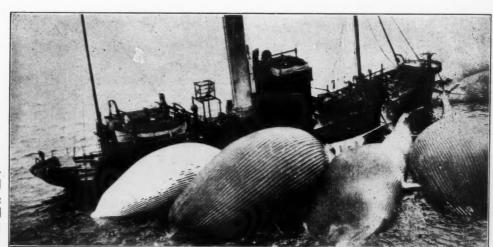
W/E now approach a topic of mutual interest to packer, tallow renderer, soaper and retail meat dealer alike—the present situation in the whaling industry and the immediate outlook for the future. Alarmed at the decimation of numbers through ruthless slaughtering without regard to sex or age, the Economic Council of the League of Nations brought together in Berlin in the spring of 1930 eminent biologists and government representatives to discuss a program of conservation that would insure against the extinction of those species of whale that have been pursued so relentlessly in the past decade. United States was represented at the Berlin meeting by an unofficial observer in the person of Dr. Remington A. Kellogg, of the staff of the Smithsonian Institution and a recognized authority on whales. One of the accomplishments of the Berlin meeting was a decision to establish an international bureau for the collection of information pertinent to the whaling activities of the different countries. A form was devised on which the

master of each vessel is expected to report certain salient facts with reference to whales taken by his vessel.

A preliminary draft agreement was drawn inclusive of the foregoing provision and three additional measures of major interest namely, (1) a prohibition of the killing of right whales and the calves or suckling whales of other species including immature whales and female whales accompanied by calves; (2) the utilization of the entire carcass of the whale (in contrast to the present method pursued by some operators, especially floating factories, of discarding the residue of the carcass after extraction of the oil); (3) the compensation of gunners and crews of whale catchers in future according to size, species, value and yield of oil from whales taken (at present, gunners' remuneration is based solely on number taken). As a subsequent meeting of the Economic Council in September of this year to consider recommendations from the different nations, the preliminary draft was adopted without substantial alteration in its original text and referred to the several countries for final approval and acceptance. The proposed regulations become effective when the signatory nations take affirmatory action by affixing their signatures to the document which probably will be early in Since there have been no indications of serious differences of opinion existing in reference to the desirability of a conservation program as outlined, it would appear probable that the whaling industry will be subject to international regulation in the early future.

Buyers Curb Whaling Activities

TWO years ago the leading consumers of whale oil in Europe and this country made common cause in respect to their purchase requirements. They agreed to take the production of (Turn to Page 79)



Whale oil production has increased nine fold during the past decade based on the 1930-31 catch.

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SOAP BUILDERS

Detergency of Alkaline Salt Solutions*

BY DR. FOSTER D. SNELL

THE primary field of detergency of alkaline salt solutions is as builders with soap. A very dilute soap solution is mainly crystalloidal. In more concentrated solutions such as 0.1%, which are more effective cleaners, a reasonable amount of the soap is present in the form of colloidal micelles. By a qualitative application of the law of mass action, the effect of a soap builder would be to cause the formation of more colloidal micelles which probably explains the increased detergency when such builders are added. Another function of the builder is to neutralize acidic ingredients commonly present in dirt. Since the pH of a neutral commercial soap is 10.2 in 0.1% solution, anything more acidic than that is acid to the soap solution. Some soap builders, notably silicates, have negative radicals which under suitable conditions are also colloidal.

For the purpose of discussion, the dirt difficult to remove is considered to consist of microscopic and submicroscopic particles coated with oil. These are too small for a detergent solution to displace the oil film, and therefore, behave like oil droplets. Important factors are wetting power, deflocculating power, and emulsifying power.

The compounds studied have decreasing total alkalinities, as shown by pH or C_{OH} values on 0.033% solutions, in the following order: sodium hydroxide, sodium orthosilicate, sodium metasilicate, trisodium phosphate, sodium silicate 1:1.58 (anhydrous), sodium carbonate, sodium silicate 1:3.86 (anhydrous), modified soda, borax. They have decreasing available alkalinities above pH 10.0, as shown by electrometric titrations of 0.66% solutions, in the following order: sodium hydroxide, sodium orthosilicate, sodium metasilicate, sodium silicate 1:1.58 (anhydrous), sodium carbonate, alkaline trisodium phosphate, sodium silicate 1:3.86 (anhydrous), modified soda, borax.

For rational comparison of the relative value of soap builders, it is essential that the pH be translated into C_{OH} .

The conclusion reached is that due to the neces-

sity of neutralizing acidic dirt a buffered builder is essential. This rules out sodium hydroxide. The most effective builders so far as alkalinity is concerned were found to be sodium orthosilicate and sodium metasilicate in that order of preference.

To obtain the highest efficiency from soap in commercial use, experience dictates that an alkaline agent be added. In the laundry industry, this is known as a soap builder. The widespread use of such builders and the relatively unsatisfactory results when a builder is not used indicate the importance of such added alkalies.

Commercial soap builders are salts of sodium hydroxide with weak acids. In a few cases the hydroxide itself is used. By far the most common soap builders are the salts with carbonic acid. These are either the commercial normal carbonate known as soda ash or variable mixtures with the bicarbonate known as modified sodas. Other important builders are trisodium phosphate, sodium silicates varying in alkali content, and borax. Caustic soda itself is popular in some sections. Admixed with soda ash it is known as "special alkali." There are numerous proprietary compounds on the market composed of mixtures of these salts, with or without addition of soap.

Nature of Soap Solutions

A N aqueous soap solution may be primarily crystalloidal or colloidal according to concentration. In very dilute solutions, it is mainly crystalloidal but in more concentrated solution heavily hydrated ionic micelles or aggregates are formed which exhibit the osmotic effect of an ordinary colloid. Although soap in aqueous solution may be called a colloidal electrolyte, this state is in equilibrium with neutral colloidal particles, that is, aggregates of molecules, simple molecules and simple ions, the amount of each changing with varying conditions.

Soap solutions are alkaline due to hydrolysis. For most concentrations, the amount of hydroxyl ion present is approximately 0.001 N but in very dilute solutions, although hydrolysis increases, the alkalinity decreases. Even in the presence

^{*}Published by special permission American Chemical Society; also Industrial & Engineering Chemistry, Jan., 1931.

of excess fatty acid over that equivalent to the alkali a soap solution remains alkaline so that the other product of hydrolysis must be an acid soap, separating as a finely suspended solid. Excess alkali remains almost entirely in the free condition. showing that basic soaps are formed. The degree of hydrolysis increases rapidly as the homologous series of fatty acids Under laundry conditions, hyis ascended. drolysis occurs to the extent of about 10%. An acetyl sulfonic acid soap in which hydrolysis is impossible, behaves in most respects like potassium stearate so that the major properties of soap solutions are believed to be due to the soap itself rather than to any products of hydrolysis.

The law of mass action may be assumed to hold qualitatively in soap solutions since the addition of common ions to the solution has the effect of producing more colloidal ionic micelles. Such an effect has been obtained experimentally although the stages which may occur in going from the ionic to the colloidal condition are problematical. When a common ion is added to an ordinary salt solution the effect may be followed semi-quantitatively and since the cause and effect are similar in colloidal solution, parallel equilibria are suggested.

The following representation of the equilibrium in a sodium palmitate solution is intended to indicate as many of the factors concerned as possible. Sodium palmitate is selected for illustrative purposes. The reactions and equilibria with the oleate and stearate are believed to be parallel. In a sodium palmitate solution, the negatively charged palmitate cluster contains more than simple palmitate ions. The free fatty acid combines with sodium ion or soap molecules to some extent forming acid soaps of varying composition, which may coexist in solution with free sodium hydroxide.

The ionic micelle is thought to contain some colloidal undissociated soap, so that the micelles of sodium and potassium soaps are not identical, as they would be if made up simply of the negative ion. A formula for the ionic micelle of sodium palmitate may be written $(NaP_x.(P-).(H_2O)_m)$, indicated in the diagram as $Na_xPy(x<y)$.

The addition of sodium hydroxide as such, or as the product of hydrolysis of a salt, drives back the ionization of both sodium palmitate and water and the whole equilibrium changes in the direction of forming more colloid. The detergent action of a solution is demonstrably improved by increase in the colloidal material present, presumably because it serves as a protective colloid in stabilizing the suspension of particles of soil. Since hydrolysis detracts from these properties. it is common laundry practice to add materials which will decrease the amount of hydrolysis. When such alkaline materials are not used, the slight amount of alkalinity in the soap solution is neutralized immediately by acidic materials present in the dirt so that the equilibrium is displaced in the other direction and the colloidal properties of the solution are decreased.

While the chief purpose of adding alkali in laundry practice is to increase the washing power of the soap, the salts employed also have detergent properties of their own, using the term in a broad sense. It has been the purpose of this study to compare solutions of the salts used as laundry soap builders, 1) with respect to their alkalinity as soap builders, and 2) with respect to their detergency as supplementary washing materials in addition to soap.

Detergent Action

THE removal of dirt from soiled fabric or from other surfaces is a complex procedure involving a number of different factors both physical and chemical. In the study of the efficiency of any one detergent or combination of detergents, it is desirable to determine the nature of those factors, and then to examine the detergent with respect to each separate factor.

First, the nature of the dirt to be removed must be considered. Since it is impossible to subject dirt as it exists on soiled fabric to chemical analysis, its exact nature must remain a matter of conjecture. A number of investigators4,1,11 have assumed the existence of "clean" dirt, that is, small, solid particles as of carbon black or graphite which become embedded in the soiled surface and are free of grease. It is probably true that small solid particles of dust, soot, etc., become embedded in soiled fabric, but it is more probable that the majority of these particles are covered with a light film of greasy matter, which would cause the particles to adhere to the soiled surface. A large part of the average dirt film probably consists of grease, varying according to the manner in which the surface was soiled. This is composed of unsaponifiable oil,

^{4.} P. H. Fall, J. Phys. Chem. 31, 801 (1927).

^{1.} R. M. Chapin, Ind. Eng. Chem. 17, 461 (1925).

J. W. McBain, R. S. Harborne and A. M. King, J. Soc. Chem. Ind. 42, 373T (1923).

saponifiable oil and free fatty acids in varying proportions.

When solid particles covered with an oil film are of comparatively large size, the oil film is first displaced and emulsified and the "clean" particles then suspended in solution or removed mechanically. Where very small particles are present covered with an oil film, the whole particle is probably suspended as a unit. It would not be necessary to emulsify separately the small amount of oil film on these particles since the whole particle incased in oil would not be larger than an oil droplet in emulsion, and would act as such. It is probable that a large part of the solid dirt is present as tiny particles such as this.

The first essential of a detergent is wetting power. This property enables the detergent to wet the small particles or to replace an oil film on a larger particle with a film of its own. Thorough wetting must precede any other detergent action and may be considered a function separate from other detergent activity. Thus, it had been shown¹⁵ that trisodium phosphate can remove greases from fabric by virtue of its wetting power when it is unable to form an emulsion of those greases. A detergent should have deflocculating power in order to break up aggregates of particles of solid dirt. It should also have emulsifying power in order to disperse the oil or oil covered dirt particles. Finally, alkalinity should be present in the detergent solution in an amount sufficient to neutralize the free acidity of the dirt.

Determination of Detergency

VARIOUS methods of measuring the efficiency of any one detergent have been proposed and tried out. It has been very difficult to find any one method that would take into account all of the factors involved, so that most of the work in this field has been carried out on one or another of the separate functions of a detergent. The different methods have been summarized by McBain12 as follows:

- "1. Measurement of surface tension against air by capillary tubes or by drop numbers or by bubbling or by measuring the amount of froth produced under definite conditions.
- 2. The measurement of surface tension against oil or paraffin or benzene by drop numbers or measurement of emulsification.
- 3. Measurement against carbon or other powders by measuring rate of sedimentation or protective action in filtration.

- 4. Protective action as measured by gold numbers.
- 5. Direct washing experiments with specially soiled clothes under controlled conditions of true temperature and concentration."

Measurement of surface tension against air has been used by many investigators because of its ease and simplicity. This value, however, cannot be assumed to represent the wetting action of detergent against greasy dirt since the interface in that case is between the detergent solution and an oil. The interfacial tension of a solution against air may determine the amount of suds which that solution will produce but the action value of suds in washing is open to question. Measurement of interfacial tension against a liquid immiscible with water should give results more closely related to actual washing power. Determination of this value by the drop number method was first used by Donnan.3

Measurements of the power of suspending inert dirt by filtering suspensions of carbon black.¹¹ or by shaking clean graphite with a soap solution and observing an "endpoint" of suds between froth and solution1 gave variable results. A more successful method of this type is that developed by Fall⁴ in which he suspended manganese dioxide in a soap solution, and then determined the amount of manganese dioxide in a fixed volume of stable suspension by titration. This assumes that clean manganese dioxide is representative of the properties of normal dirt.

The gold number method has apparently been employed by only one investigator.⁵ According to this method the minimum quantity of colloid required to protect a fixed volume of red gold sol from precipitation on the addition of a definite amount of sodium chloride was determined. Protective action toward red gold sol is not very closely related to deflocculating or emulsifying power.

Direct washing tests on specially soiled fabrics are described by Heermann.7 Recent tests with the same type of procedure under carefully controlled conditions have been carried out by Rhodes and Brainard.13 The difficulty encountered with this method has been in finding a suitable artificial soiling material and a variety of substances have been tried for the purpose.8 A subcommittee of the American Oil Chemists Society is working on the development of a stand-

C. P. Vincent, J. Phys. Chem. 31, 1297 (1927).
 J. W. McBain, "Third Report on Colloid Chemistry," 1920, p. 24. His Majesty's Stationery Office.

^{3.} F. G. Dennan, Z. physik, Chem. 31, 42 (1899). J. W. McBain, R. S. Harborne and A. M. King, J. Soc. Chem. Ind. 42, 373T (1923).

R. M. Chapin, Ind. Eng. Chem. 17, 461 (1925).P. H. Fall, J. Phys. Chem. 31, 801 (1927).

Goldschmidt, Kolloid Z. 2, 193, 227 (1908)

P. Heermann, Z Deut. 01-Fett-Ind. 44, 361 (1924).
 J. H. Rhodes and S. W. Brainard, Ind. Eng. Chem. 21, 60-68 (1929).

A. Eliz. Hill, J. Agr. Res. 39, 539 (1929).

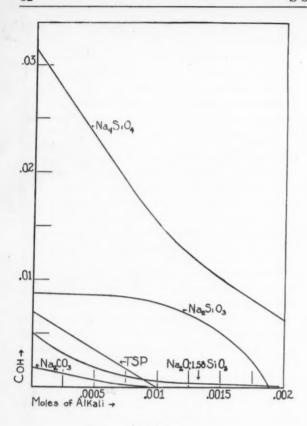


FIGURE II
Electrometric Titrations of 0.66 per cent
Solutions of Soap and
Common Soap Builders at 25°, Expressed as COH

ard method for direct washing tests at the present time. 4,9,14 Their soils are carbon black and burnt umber. Tests of this kind under carefully defined conditions are valuable as a correlation of data obtained by the other methods.

In this study, the alkaline properties of the salt solutions have been measured first in order to show their effectiveness in repressing hydrolysis of soap solutions and also as an indication of their detergency. For determination of wetting power, we have chosen the measurement of interfacial tension against an oil as the most accurate and convenient method. Results from these determinations may also be considered as indirectly indicating the emulsifying power. For direct determination of emulsifying power, a method has been devised wherein the ability to suspend small particles coated with oil is measured. Finally, practical washing tests with a specially constructed washing machine have been carried out as a check on the results obtained by the other determinations.

Alkalinity of Builder Solutions

N order to substantiate the theory that it is necessary to neutralize acidic materials in soiled fabric, tests were made in a power laundry on the wash solutions in normal use. A sodium carbonate builder was used in this laundry in conjunction with the soap. Samples from the first four wash waters through which the clothes are passed in the course of the ordinary laundry procedure were taken before and after contact with the soiled clothes. These samples were titrated to the phenolphthalein end point and the results calculated to the alkalinity at the beginning and end of each operation. The difference between these two values was then estimated and this difference taken to be a measure of the acidity neutralized. The amounts of acidity neutralized per liter in the first four washes were as follows:

First Wash 0.0050 Second Wash 0.0024			
Third Wash 0.0022			
Fourth Wash 0.0009		66	
Total acidic materials neutralized 0.0105	66	66	44

This is not an accurate measure of the actual amount of acidic materials present in the dirt of an ordinary laundry and cannot be assumed to have entirely removed all such materials. These tests show definitely, however, that there is a considerable amount of acid to be neutralized by the detergent solution under laundry conditions. One purpose of using an alkali in addition to soap is therefore evident.

Since the salts used as soap builders are uniformly salts of strong bases and weak acids, the alkalinity produced in solution is buffered. The concentration of alkali when the salt is first dissolved does not represent the total alkali available for reaction with acid, since further hydrolysis occurs as reaction proceeds. In measuring the alkalinity of these salts therefore, two separate factors must be considered, the initial concentration of hydroxyl ion and the total amount of alkalinity available for reaction. The initial alkalinity has been measured by pH determinations and the total alkalinity by electrometric titrations.

Soap concentrations as ordinarily used in the power laundry vary between 0.1 and 0.15 per cent. For sodium palmitate, this corresponds to 0.0036 to 0.0054 N, and the normalities are very nearly the same for sodium oleate or stearate. The amount of builder used in proportion to the soap generally varies according to the strength of the builder. In general, a strong builder refined to a salt giving alkalinity buffered at a relatively high level is used in equal amounts with soap, a moderately strong one in the proportion of 2 parts of soap to 1 of builder and a weak one

Detergents Committee, A. O. C. S., Oil & Fat Inds. 4, 29-34, 66-70 (1927).
 L. T. Howells, Oil & Fat Inds., 6, 23-9 (1929).

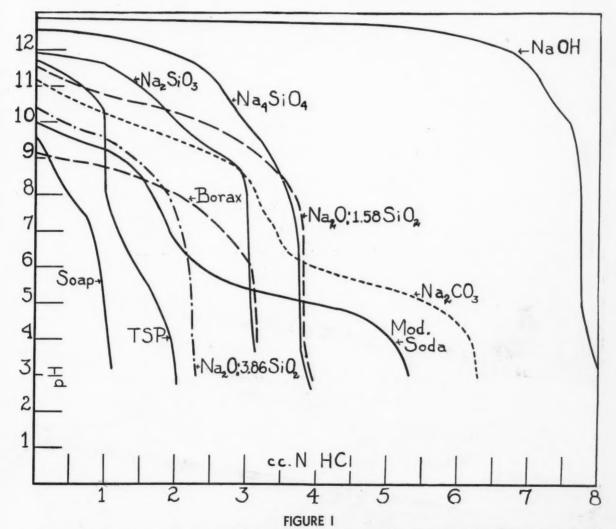
^{14.} James C. Vail, Soap 7, 29-30 (1931).

in the proportion of 3 parts of soap to 1 of builder. This indicates that a strong builder is considered to have sufficent detergent properties so that it may replace some of the soap. The weakest concentration, a 0.033% solution, has been chosen for these determinations as being most representative of general laundry practice, and as the fairest basis for comparison.

Solutions of the following salts, having approximate compositions as noted, were prepared: Sodium metasilicate, Na₂O, SiO₂, 9H₂O; sodium silicate, Na₂O, 1.58 SiO₂ (anhydrous); sodium silicate, Na₂O, 3.86 SiO₂ (anhydrous); trisodium phosphate, Na₃PO₄, 12H₂O; sodium carbonate, Na₂CO₃; modified soda, Na₂CO₃, NaHCO₃; borax Na₂B₄O₇, 10H₂O. The pH values of these solutions at 25° C. are presented in Table I. (On pg. 83.) The values for similar solutions of sodium hydroxide and of sodium oleate are included to show comparative figures for a highly alkaline material and for soap alone. Sodium oleate was

chosen as the standard soap for several reasons. It can be prepared in a substantially pure condition by mixing chemical equivalents of oleic acid and sodium hydroxide, with due allowance for the small amount of free hydrocarbons in the oleic acid. When so prepared, the solubility in water is satisfactory so that it may be measured out from a cold solution and even in reasonably concentrated solutions will not gel when cold. Its properties are in general those of a commercial soap, with due allowance for its greater detergency below the titer values of stearic acid and palmitic acid. Values are given both for the builder solutions alone and for mixtures of the builder and soap.

While pH values are a convenient form of expressing hydrogen ion concentration, these values are apt to be misleading for comparative purposes. The pH value is a logarithmic function so that the actual difference in concentration of (Turn to Page 80)



Electrometric Titrations of 0.66 per cent Solutions of Soap and Common Soap Builders at 25°, Expressed as pH.





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Contract or Spot Delivery

In tank cars and multiple unit cars.

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Alkalies and Chemical Products Manufactured by

NEW YORK

The Solvay Process Company Indianapolis

Cleveland Philadelphia

61 BROADWAY

Chicago

Detroit

Syracuse Pittsburgh Cincinnati Kansas City

St. Louis

NEW PRODUCTS



◀ HANGING the name of a company, and at the same time changing the packages of all the products of that company where the line involves some two hundred items, is admittedly a man-size job. Sweeping changes and modernization of packages has recently been completed throughout the entire line by the Zanol Products Company of Cincinnati which until a short time ago was widely-known as the American Products Company. The two-hundred item list of Zanol Products embracing soaps, toilet goods, sanitary products, and proprietaries, has been completely restyled and repriced. twenty-five concerns furnished the new materials and participated in the project in various capaci-The undertaking was begun almost two years ago, in May, 1930, under the direction of Mrs. Ruth Hooper Larison, of New York, merchandising consultant. The new line was started on its way to the consumers through the 6,000 sales representatives of the company in October, 1931.

The Zanol company sells direct to consumers by the wagon-route method and, according to executives of the company, revamped its line so that it could compete to a much greater advantage with the products usually sold through retail stores. The 200 products of the firm embrace five lines, Faith Avery, La Bara, Dermaline, Dream Girl, and Zanol, the latter having been the trade mark used by the company since it was established twenty-five years ago, and which was recently incorporated in the firm name. A view of the new Dermaline line of shaving materials is shown herewith.

Standard Silicate Co., Cincinnati, has recently issued a booklet describing characteristics and uses of sodium metasilicate. It is stated that in the proportion of two to four parts of soap to one of sodium metasilicate very good results have been obtained in various laundries. It is also recommended for use in bottling plants, dairies, garages, factories, the metal industry, hotels, restaurants, etc.

Hills-McCanna Company, 2349 Nelson Street, Chicago, has acquired the manufacturing and sales rights to a new valve which is especially constructed to handle corrosive and volatile liquids, also those which have gritty solids in suspension. They state that special construction makes it possible for them to price this new equipment in the range of iron valves. Literature is available on request. The company manufactures a wide variety of pumps, valves and related machinery.



HERE is something new in a soap dispenser. It is made of solid moulded Bakelite of the mottled type. This new departure in soap dispensers is being made and used in England. The manufacturer is the London Oil Refining Co., Welwyn Garden City, England. The photograph is through the courtesy of the Bakelite Corporation, New York.

United Drug Co., Boston, has been successful in preventing the registration of two trademarks which it claimed would be infringements of its mark "Puretest" used on chemical products. Purex Corp., Los Angeles, sought to register "Purex" for use on a bleaching compound and water softener, and Sears, Roebuck & Co. planned to register "True-Test" for a line of chemical, medicinal and pharmaceutical products.

Paillard & Benoit, Lausanne, Switzerland, manufacturers of soap wrapping machines, have established an English branch under the name, Wrapping Machines, Ltd., located at 36 Victoria street, Westminster, S.W. 1.

The Capper-Kelly price maintenance bill was re-introduced in both houses of Congress by its two sponsors shortly after Congress re-convened. Slight modifications have been made in the bill in the light of questions debated last Spring.

Chicago Liquid Soap Meetings

Ben Alexander of the Eagle Soap Co. was scheduled to report at the January 12 meeting of the Chicago Liquid Soap Manufacturers' Association on sales information for members. The following program is in prospect for coming months; February 9, Public Information, report by Mr. Jackson; March 8, Code of Ethics, report by Mr. Aronson; April 12, Membership. Committee chairmen appointed by the organization are as follows: Educational policy, Mr. Alexander; Public information, Mr. Jackson; and code of ethics, Mr. Aronson.

Program for Packaging Exposition

Arrangements have been completed for the following speakers and papers on packaging technique which will be presented at the Packaging, Packing and Shipping Exposition and Conference to be held at the Palmer House, Chicago, March 7-12: "Packages from the Consumer Point of View," Katherine Fisher, Director, Good Housekeeping Institute. "What is an Effective Package?", Ben Nash, Product Development Engineer and Merchandising Counsellor. "Color and Design in Packaging," Arthur S. Allen, Color Engineer. "Experience of Companies in Re-Stylpackages." Speaker to be announced. "What are the Minimum Requirements of Containers?" C. A. Plaskett, in charge of container investigation, U.S. Department of Agriculture, Forest Products Laboratory, Madison, Wis. "New Transportation Developments and Their Effect on Packaging and Shipping," Lewis Sorrell, professor of transportation, University of Chicago. "To What Extent and Under What Circumstances Should the Shipping Container Carry Advertising?"

Preparations are being made for an attendance of 10,000 at the exposition. Among those present at the first conference held at the Hotel Pennsylvania last May were Robert D. Colgate, vice-president of Colgate-Palmolive-Peet Co.; C. B. Haines, advertising manager, Standard Brands, Inc.; Austin S. Ingleheart, vice-president General Foods Corp., and D. P. Smelser, market research manager for Procter & Gamble Co.

McKesson & Robbins have finally been successful in cancelling the registration of the trademark "Milk of Magnesia" by Charles E. Phillips Chemical Co. The mark was first registered in 1905.

Hoyt R. Sheehan, vice-president of Wildroot Co., hair preparations, Buffalo, has been made a director of the Buffalo Automobile Club.

SECURITY PRICES

PRICES of stocks of soap, chemical, insecticide, and allied companies as quoted on the New York Stock Exchange, Curb Exchange, other exchanges and over-the-counter are given in the following table. This table of prices is compiled monthly for *Soap* by a representative of one of the oldest and best-known brokerage houses in New York.

	High	Low	Dec. 1	Jan. 2
	1931	1931	1931	1932
Allied Chem	1823/4	64	$763/_{8}$	66
Am. Agric. of Del.	293/4	51/8	63/4	6
Amer. Cyan. "B".	$12\frac{3}{4}$	25/8	41/8	3
Armour of Ill. "A"	$4\frac{1}{2}$	3/4	11/8	1
Bon Ami "A"	$66\frac{1}{4}$	49	57	49
Brillo	81/2	$5\frac{1}{8}$	8	$6\frac{3}{4}$
Colgate, P. P	$50\frac{1}{2}$	24	$29\frac{5}{8}$	27
Corn Prod	$86\frac{5}{8}$	$36\frac{1}{4}$	48	39%
Coty	18	27/8	4	3
Dow Chem	$.51\frac{1}{2}$	30	36	31
Drug, Inc	$78\frac{3}{4}$	423/4	$54\frac{1}{2}$	$50\frac{1}{2}$
Du Pont	107	$50\frac{3}{4}$	$56\frac{1}{2}$	$51\frac{1}{4}$
Glidden	$16\frac{1}{8}$	$4\frac{1}{2}$	$6\frac{3}{8}$	$41/_{2}$
Gold Dust	$42\frac{1}{8}$	$14\frac{1}{2}$	$19\frac{1}{4}$	$17\frac{1}{8}$
Gulf Oil	76	38	$45\frac{1}{8}$	$26\frac{1}{2}$
Heyden	13	$6\frac{1}{4}$	71/4	$6\frac{1}{4}$
Int. Agric	$5\frac{1}{4}$	11/8	13/8	11/4
Lehn & Fink	/ 1	$18\frac{1}{2}$	201/4	20
Mathieson	$31\frac{1}{2}$	12	$16\frac{1}{2}$	$14\frac{1}{2}$
McKess. & Rob	17	$3\frac{1}{2}$	$6\frac{1}{2}$	4
Monsanto	283/4	$16\frac{1}{4}$	$22\frac{1}{2}$	$21\frac{1}{2}$
Newport "A"	55	41	55	55
Proc. & Gamb	711/4	363/8	44	39
Shell Union	101/4	$21/_{2}$	41/8	3
Sher. Will	$68\frac{1}{2}$	$33\frac{7}{8}$	40	$34\frac{1}{2}$
Sinclair	$15\frac{7}{8}$	41/8	$6\frac{1}{2}$	$45/_{8}$
S. O. of Cal	$51\frac{3}{4}$	$23\frac{1}{8}$	$301/_{2}$	241/8
S. O. of Ind	$38\frac{1}{2}$	$13\frac{1}{2}$	191/8	$14\frac{3}{8}$
S. O. of N. J	$52\frac{1}{2}$	26	$325/_{8}$	27
S. O. of Ohio	$62\frac{1}{2}$	23	36	28
Swift & Co	$30\frac{3}{8}$	141/8	221/4	$17\frac{1}{2}$
Union Carb	72	$27\frac{1}{8}$	34	287/8
Westvaco	40	75/8	101/4	101/8
Wilson & Co	4	5/8	11/4	7/8
	0			

Swift & Co. has reported a net income of \$8,235,301 for the fiscal year ended October 31, 1931, including \$7,558,308 non-recurring profit from the sale of capital assets. The net was equal to \$1.37 a share against \$2.08 a share, or a total net of \$12,491,189 in the previous fiscal year.

E. R. Squibb & Sons on December 23 paid an extra dividend of 25c a share on common stock of record December 11.

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C-P-P Concludes Good Year

Colgate-Palmolive-Peet Co. enjoyed a satisfactory business year in 1931, acording to a statement made public January 8, by Charles S. Pearce, president, earning a net profit every month of the year. The common stock dividend requirements of \$2.50 a share were earned by a good margin. During 1931 operating expenses were reduced about \$1,000,000, savings being effected by equalization of salaries and wages rather than by any general reduction. Pearce's statement in part follows: "In view of the many foreign disturbances as well as domestic disturbances, we feel that we have had a satisfactory year. We had a record first half, but there was a noticeable curtailment of buying in September and October, which are usually our best months, so that our last half was not up to earlier expectations.

"November and December were both considerably better than in 1930, however. Our domestic business netted us a profit every month last year, while in 1930 the slump in buying in November was so drastic that we suffered a small loss.

"During the year we expended close to \$15,-000,000 for advertising, which is more than we spent in 1930. We also continued to expand our foreign activities. Early in 1931 we began doing business in Poland and Switzerland. We were naturally affected by the drop in monetary values in a number of countries in which we operate.

"In Germany, where an embargo was placed on exportation of money, we utilized our surplus cash in the purchase of raw materials. In Australia, where the cost of exporting money was excessive, we invested our surplus cash in good domestic securities which as a rule paid up a good return. In other countries we kept our cash balances as low as possible."

Cudahy Packing Company reports for the year ended October 31 net earnings, after depreciation, interest and provision for Federal taxes, of \$2,009,991, equal after preferred dividends to \$3.06 a share on the 467,489 shares of common stock. In the preceding fiscal year the company reported net earnings of \$2,930,318, equal to \$5.03 a share on the common stock.

Orbis Products Trading Co., New York, discontinued its agency connection with Tombarel Freres, Grasse, effective December 31. Future plans call for broadening its policy of selling natural and aromatic products of its own manufacture. The company will continue to import stocks directly from primary markets.

SOAP MACHINERY

Special Offerings



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



H-A SOAP MILL This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size

DOPP CRUTCHERS

Sizes from 300 pounds to 3,000 pounds. All in best condition and guaranteed.



Quality Used Machinery

You can see NEWMAN equipment in actual operation at our Chicago warehouse.

DRYERS - Two Proctor & Schwartz Large Roll Soap Chip

Dryers Complete.

Three Proctor & Schwartz Soap
Chip Dryers with five Chilling
Rolls. Devine Double Drum Vacuum Dryer. Proctor & Schwartz Bar Soap

Drvers. Condon & Huber Soap Chip

Dryers.
SOAP CRUTCHERS — Houchin-Aiken, Dopp & Doll Steam Jacketed Crutchers, 1000 lb., 1200 lb., 1350 lb., 1500 lb., 1800 lb., 3000 lb., 6000 lb. and 10,000 lb.

SOAP PRESSES—Jones, Machinery Designing, & Ralston Automatic Presses for toilet and laundry soap. Dopp, Crosby & Empire Foot Presses.

laundry soap. Dopp, Empire Foot Presses.

Scouring Soap Presses.

GRINDERS & MIXERS — Day
Jacketed Marshmallow Mixers,
Pony Mixers, Talcum Powder
Mixers, Rouge Mixers, Ointment
Mill, etc. Schultz O'Neill Mills.

SOAP CUTTING TABLES— Houchin-Aiken Steel Automatic Table with self-spreader and extra headers.

Wooden Tables with and without self-spreader attachments.

SOAP SLABBERS-Houchin-Aiken, Curtis-Davis, Dopp & Newman's Hand and Power Slabbers.

TOILET SOAP MILLS-2, 3, 4, 5 and 6-roll Granite Soap Mills Houchin-Aiken 4 and 5-roll Steel

Buhler 3, 4, 5-roll Steel Mills. PLODDERS — Houchin-Aiken, Rutschman & Allbright-Nell 6", 8" and 10" Plodders.

SOAP POWDER MACHINERY -Blanchard No. 10-A and No. 14 Soap Powder Mills. Broughton Soap Powder Mixers. Wms. Patent Crusher & Pulver-

Sedberry Crusher, Grinder & Pulverizer.

A-N 5x7 Crystallizing Rolls.

FILTER PRESSES—Sperry, Per-rin & Shriver Cast Iron Filter Presses 12", 18", 24", 30" and 36". International and Monopod Fil-

VARIOUS OTHER ITEMS-Wm. Garrigue Glycerine Evaporators.

Steel Soap Frames, 600 lb., 1000 lb., 1200 lb., 1500 lb., and 1800 lb. cap.

Automatic Soap Wrapping Machines.

Copper and Aluminum Steel. Kettles.

Soap Remelters, Tube Fillers. Filling and Weighing Machines Pneumatic Scale Corp. Can Fill ing Machine for cleansers, etc. Brass Soap Dies for foot and aut.

Presses. Soap Chippers, Scales, Motors,

Amalgamators. Soap Racks, Bottle Filling and Capping Machines. Talcum Can Crimpers, etc.

Send us a list of your surplus equipment-We buy single items or complete plants.

Also makers of a new line of soap machinery. Get our complete list and prices on this new equipment! All used machinery is sold as absolutely guaranteed in first class working condition. Everything listed here is ready for immediate shipment.

NEWMAN TALLOW & SOAP MACHINERY CO.

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Our Forty Years of Soap Experience can help solve your Soap Problems

Say you saw it in SOAP!

" Zanol" Trademark Upheld in Two Suits

The United States Court of Customs and Patent Appeals has recently reversed two decisions of the Commissioner of Patents which involved registration of trademarks which the court judged would be confusingly similar to the "Zanol" registration held by American Products Co., Cincinnati. In one case Herbert F. Braithwaite, cosmetic manufacturer, sought to register the phrase "Allsworth Sanlo Greaseless Cleansing Cream" as a trademark for a toilet preparation, which in the other F. A. Leonard sought to register "Zeno" as a mark for a dentifrice. Both registrations were opposed by American Products Co., owners of the mark "Zanol" used on a line of cosmetics and pharmaceuticals. The Patent Commissioner decided in favor of the registrants. but these decisions were reversed by the Court of Appeals.

In what seems to be, partially at least, an attempt to further safeguard its ownership of the "Zanol" mark, the American Products Co. has recently changed its name to Zanol Products Co. The firm was originally organized as Mills Brothers Co., and it was not until 1924 that the name was changed to American Products Co. Coincident with the most recent change in name the company has brought out a new line of cosmetics known as the "Faith Avery" line.

Drug Trade Dinner March 15

The 41st annual meeting of the drug and chemical section of the New York Board of Trade will be held at the Drug & Chemical Club, January 19. Percy Magnus, chairman of the section, will report on the activities of the section over the past year. Other reports will be given by Fred Watermeyer on essential oils, by Victor E. Williams for manufacturing chemists and by C. L. Speiden for manufacturers of heavy chemicals. The 7th annual dinner of the section will be held March 15th at the Hotel Commodore. Those serving on the dinner committee are: S. W. Fraser, Burroughs, Wellcome & Co.; Percy Magnus, Magnus Mabee & Reynard, Inc., and Gustave Bayer, Merck & Co. Charles A. Prickett, Frank J. McDonough and Ray Schlotterer are members of the speakers' committee.

Polak & Schwarz, Ltd., Zaandam, Holland, have issued a price list as of December, 1931, giving specifications and quotations on all the essential oils and synthetic perfumes which they supply.

The M. S. "Beulah" recently landed a cargo of 1,800 tons of copra in San Francisco, the cargo being consigned to a local oil crushing mill.

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Iowa Soap Plans 1932 Campaign

Iowa Soap Co., Burlington, Iowa, have announced plans for an intensive sales campaign for the early part of 1932, backed by a material expansion in house-to-house sampling activities. Four new sampling trucks will be placed in service early this year, each manned by a manager, assistant manager, storeman, and four distributors. Eight new cars for advance salesmen are also being placed in service. The new sales equipment will be used chiefly in Iowa, Illinois, Missouri, Kansas, Indiana, and Michigan. The company has also announced the formation of a new wholesale department of the company in charge of Arthur Hassel to cater to the company's institutional and industrial trade.

Issue Booklet on Sodium Perborate

Properties and uses of sodium perborate are discussed by Roessler & Hasslacher Chemical Co., Niagara Falls, N. Y., in a booklet just issued. It is stated that the addition of this product to soap helps in removing stains from fabrics in laundry work and that when used with silicate of soda its oxidizing influence is particularly useful. Its stability is claimed as a particular feature making it useful in the preparation of washing compounds for home use. Copies of the booklet giving full data on physical and chemical properties of sodium perborate are available on request. Two other booklets issued by the same concern cover trichlorethylene and non-flammable solvents.

October Glycerine Imports Higher

Imports of crude glycerine into United States during October, 1931, advanced moderately, totaling 1,053,544 pounds, worth \$50,376, as compared with 800,011 pounds, valued at \$39,286, in the previous month. Imports of refined glycerine were also higher in October, standing at 83,505 pounds, worth \$6,143, as against 50,891 pounds worth \$3,853, in the previous month. The following figures give in pounds the imports of glycerine into the United States over a period of years:

			Refined	Crude
1923			585,792	14,548,660
1924			1,500,644	14,427,054
1925			2,043,606	19,264,654
1926			10,839,093	27,658,552
1927			8,288,574	14,943,670
1928			4,217,943	4,951,651
1929			5,381,684	14,951,901
1930			3,136,809	12,144,193
Jan(ct., 19	931	951,917	8,833,848

CHICAGO NEWS

HICAGO Perfumery, Soap and Extract Asso-Ciation held its annual business meeting and election of officers at the noon luncheon session of Wednesday, December 16th, 1931. As no opposition ticket was presented, the nominees of the regular ticket were elected unanimously, and the association will be directed during 1932 by the following executives: President: Donald M. Clark, of Franco American Hygienic Co. This is Mr. Clark's second experience as ranking officer, for he was president during 1921. He has always been an enthusiastic supporter of association activities and his work on various committees in the past has been both spirited and productive. Needless to say he brings to the task of chief executive, ability, experience and knowledge of the association's needs.

Vice president is Louis A. Solo, of Solo Laboratories. Mr. Solo is president of the firm bearing his name and while he is a comparatively new member, having joined the association in 1928, he has been one of the most loyal and energetic workers during the past few years. Although he has served on various committees, he has not held office previously. Secretary-treasurer: William H. Schutte, of P. R. Dreyer, Inc. Mr. Schutte enters his third term in this office in which he has set a high standard. The work of the secretarytreasurer is trying and time-consuming, and Mr. Schutte, far from dismissing any of his responsibilities, has repeatedly undertaken additional work assisting committees and promoting social affairs. He has won the admiration and respect of all the members.

The activities of the association for the year 1931, under the direction of President Harold E. Lancaster, furnish a record of executive ability and cooperation among the members. Probably the most noteworthy achievement was the successful management, by A. C. Drury, of A. C. Drury & Co., of the joint golf auxiliary in which both Chicago associations took part. Ray Morris, of Orbis Products Trading Co., promoted efficiently, as chairman, the regular weekly bowling matches, and conducted one highly successful tournament, in which almost every participant was awarded some sort of prize. The services of Arnold G. Schneider, as emergency chairman of Entertainment Committee, undoubtedly were the determining factor in the unusual success of that affair. Three new members, Merck & Co., Bauer & Black and Columbus Laboratories, joined in 1931. The executive committee for 1932 upon which the three officers will serve, has retained Mr. Lancaster as a member and announces that Frank T. Robinson, of Monsanto Chemical Works has been appointed to fill the remaining vacancy.

Chicago Drug and Chemical Association completed a successful year with its annual stag banquet, which was held at the Stevens Hotel on the evening of Thursday, December 18th. The banquet was a Christmas present from the association to its members and their appreciation. gauged by their response, was boundless for it was not discernible that anyone was absent and all the proceedings were marked by gaiety and approval. William O'Neill, of Emerson Drug Co., was general chairman and he was aided by a corps of assistants. The souvenir bags were larger than those of previous years and they were well The entertainment was arranged under the direction of Walter Kochs, of Victor Chemical Works and the souvenir bags were filled by the diligence of Leo Lanigan, of McKesson-Fuller-Morrison Co. The remaining members of the committee were: Chris Christensen, of Chas. Pfizer & Co.; C. S. Curtis, of The Wilson Laboratories; W. P. Trebilcock, of the Coca Cola Co.: W. K. Teller, of Columbus Laboratories: H. C. Arms, of Central Scientific Co.; and Ottmar M. Krembs, of Krembs & Co. The Drug and Chemical Association's election of officers takes place in March.

Albert Verley Represents Tombarel

Albert Verley, Inc., Chicago and New York, are now representing Tombarel Freres, Grasse, France, in the United States and Canada. The new arrangement was effective January 1. Complete stocks of Tombarel products, which include floral products and essential oils, are being carried both at New York and Chicago. Among the principal items is lavender, Tombarel Freres being proprietors of large lavender plantations in the Alps.

David A. Bennett organized Albert Verley, Inc., in May, 1926. Since that time the company has been marketing the aromatic chemical products of Etablissements Albert Verley, Ile, St. Denis, France, in the United States and Canada. The company's headquarters have been in Chicago but a branch office has been located in New York for the past two years. The Verley plans for expansion included moving to new headquarters in New York early last month. The entire fourth floor at 114 East 25th Street is now being occupied as an office and laboratory. Zollinger, who recently joined the Verley organization as vice-president and a director, makes his headquarters in New York. Mr. Bennett, president, will continue to be located in Chicago.

Plan for N. A. D. C. Convention Exhibits

As in past years an exhibit of new supplies and materials for dry cleaners will be one of the features of the annual convention of the National Association of Dyers and Cleaners to be held at Cleveland, January 19-22. Soap makers will again occupy an important place in the exhibit, the following having already announced their intention of showing their products:

Armour & Co., Chicago, showing a complete line of benzine and tallow soaps. Booth in charge of T. M. Galvin, sales manager.

Beltine Chemical & Manufacturing Co., Chicago, showing the "Beltine" line of dry cleaning soaps. Booth in charge of W. K. Earle.

Davies-Young Soap Co., Dayton, Ohio, showing "Buckeye" spotter, "Buckeye" dry cleaning soap and "Filtersol" liquid dry cleaning soap. Booth in charge of E. G. Eckerman, sales manager.

Force Products Co., Chicago, showing the "Force" line of dry cleaning soaps. Booth in charge of Carolyn Freund, president.

Huntington Laboratories, Huntington, Ind., showing a complete line of dry and wet cleaning soaps. Booth in charge of J. F. Kohl, manager of dry cleaning department.

Midland Chemical Laboratories, Inc., Dubuque; Ia., introducing a new paste soap known as "Texlon." Other products shown will include "Benzamo" paste dry cleaning soap, "Filohtex" liquid filter soap, "Midalco" alcohol soap, "Kresoleum" detergent and prespotter and "Midtexso" textile wet cleaning soap. The booth will be in charge of J. E. Callender, manager of the dry cleaners' service department.

Riverside Mfg. Co., St. Louis, showing dry and wet cleaning soaps and spotting preparations. Booth in charge of Jabez R. Gadd, president.

R. R. Street & Co., Chicago, showing "J-P-S" dry cleaning soap. Booth in charge of Paul Warren, vice-president.

Warren Soap Co., Boston, showing dry cleaning soap, rug soap and blanket soap. Booth in charge of Albert H. Bixby.

Other exhibitors at the show will include American Cyanamid Co., New York, showing the regular line of "Konate" mothproofing solutions, and Darco Sales Corp., New York, whose booth in charge of L. M. Gill, manager of the research and development department, will be used to show "Darco" activated carbon, an efficient purifying ingredient which is used in dry cleaning solvents.

John W. Dorsey, a safety engineer with Solvay Process Co, died of heart disease, December 16 at his home in Syracuse. He was sixty-two years old and had been with Solvay for forty-eight years.

Cincinnati Soap Moves Plant

The removal of the Cincinnati Soap Co. factory to new and enlarged quarters in Dayton, Ohio, has been announced by executives of the Company. Offices will remain at Spring Grove and Clifton Avenues, Cincinnati, connected by private line phone.

Increasing business made the Cincinnati plant inadequate. The Dayton plant has over four times the production capacity plus considerable acreage to allow for further expansion. Only the most modern and efficient equipment is being installed in the new plant. One feature is the installation of a new \$40,000 automatic power plant. The new plant will also have two large capacity drying machines valued at \$15,000 each. All equipment is being laid out with connecting conveyor system so that materials will move in a straight line through the plant without lost motion.

Established in 1863, the Cincinnati Soap Co. made modest progress until it came under the present management, since when it has expanded steadily. Eugene H. Sterne, president of the Company, has been with the firm since 1898. Albert Steiner, vice-president, has been affiliated since 1916. Max P. Rosenthal, sales manager, came to the firm in 1917. An interesting member of the Company's personnel is the superintendent of soap making, Samuel L. Schnabel who has been with the company since 1889, when he was only 17 years old. His father was connected in similar capacity with the company, when it was organized in 1863. In addition to a full line of toilet soaps under regular and private brands, the company will make cosmetics, liquid soaps, laundry chips, laundry soaps and allied products.

A committee of naval stores producers is preparing suggested legislation for the coming session of the Alabama legislature looking to a limitation in the state output of naval stores products. It is believed that a reduction of at least 30 per cent in production will be necessary to put the industry on its feet. One suggestion is that legislation be adopted to prohibit the tapping of trees under a certain size. Another is that a bill similar to the cotton control measures be adopted.

For at least the first five months of 1932 imports of many toilet preparations into Great Britain will be forced to pay an ad valorem duty of fifty per cent in addition to the already existing duties. The new duties put into effect late in 1931 will affect among other products toothpaste, shampoo powders, bath salts and perfumes. Soaps are not considered in the new levies.

When it comes to supplying the soapmaker

with perfume materials, we are in position to furnish the highest quality merchandise at interesting prices.

When Again in the Market for

Oil Rosemary Spanish
Oil Thyme Red and White
Oil Lavender Flowers French
Oil Vetivert Bourbon and Java
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VANILLIN FABRIK Hamburg, Germany Aromatic Chemicals

PERSONAL AND IMPERSONAL

Armour & Co. have established a laundry soap factory at their Argentina packing plant. The soap is being made for the company's own use in order to utilize some available raw material to better advantage than in the past.

Justice Manufacturing Co., Lamoni, Iowa, are adding three new items to their list of manufactured products in 1932, a liquid soap, a new antiseptic dish washing compound, and a healing salve, according to a recent announcement from the company.

John T. Stanley Company, soap manufacturers, New York, has appointed Donahue & Co., New York, as advertising representatives for 1932. Mobo automobile specialties as well as other of the Stanley soap products will be advertised in business papers and through the mail for 1932.

In a campaign to check misrepresentation of the quality of its toilet goods Coty, Inc., has secured a permanent injunction against the owners of the Trixie Shoppe, New York cut rate toilet goods store, restraining them from representing that Coty products are impure or injurious. The action resulted from a complaint by a regular user of Coty products that she was advised that use of Coty powder would injure her skin. Coty expects to prosecute similar cases until the abuse is eliminated.

The Solutionizer Co., Chicago, in announcing the new "Universal Solutionizer," now offer a complete line of equipment for producing and controlling soap and water solutions, using any type soap except liquid and most powders.

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The survey of "Price Cutting and Price Maintenance" undertaken about a year ago by Professor Edwin R. A. Seligman of Columbia University at the behest of Edward Plaut, president of Lehn & Fink, Inc., and chairman of the committee of the New York Board of Trade to study the subject, was made public at a dinner at Washington, January 7th. The report recommends legislation to remove any existing barriers

against the "refusal-to-sell" method of enforcing price maintenance, and adds that some machinery should be set up for business men, similar to the trade practice conferences sponsored by the Federal Trade Commission, to work out practices that would make price maintenance more generally effective than the "refusal-to-sell" method alone.

Oil Trades Assn., New York, met at the Level Club Hotel, January 12, for a beefsteak dinner. A considerable number of members and guests turned out early, exercising at handball and swimming in order to build up good appetites. After the dinner, a floor show was presented. Albert J. Squier, perennial Chairman of the Entertainment Committee, officiated as usual.

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Assistant Commissioner of Patents Millard J. Moore has ruled that the Golden Eagle Soap Co., of San Francisco, is not entitled to register as a trade mark for soap, a mark consisting of the picture of an eagle with spread wings and the Spanish words, "Real Azul." His decision was based on the fact that the John T. Stanley Co., of New York, had prior use of a mark for soap consisting of a picture of an eagle with spread wings and the Spanish words, "Jabon El Aguila Azul."

Procter & Gamble Co. has been permitted to register the word "Polo" as a trademark for toilet and bath soap in spite of the opposition of Annie M. Malone, St. Louis, holder of the mark "Poro" for use on a line of toilet preparations. Procter & Gamble used the "Polo" trademark on laundry soap as early as 1889 and the Patent Office held that in case of confusion it would be Procter & Gamble who would be entitled to protection, not the opposer.

Los Angeles Soap Co., Los Angeles, distributed \$130,000 in bonus checks as Christmas presents to its employees on December 24. Each employee who had been on the payroll for two years or more share in the distribution. The company has just concluded what executives describe as one of the most successful years of its history,

having increased the number of its employees by 10%. During the year hours have been shortened and work has been divided into two shifts. The wage scale has not been changed.

The Foragers of America, an organization of soap and toilet goods salesmen, held their 35th annual business meeting, December 30. The annual group dinner was held January 9. Members who will serve on the board of governors for the next two years include: T. M. Hanlon, Ed. S. Cramer, Bert Stamler, J. B. Brennan, Jerry C. Nolan and Jos. V. Gartlan.

The team representing E. R. Squibb & Sons in the Wholesale Drug Trade Bowling Association of New York was tied for first place in league standing on January 6th with the Carbide & Carbon Chemical Co. team. Each had twelve wins and six losses. The Colgate-Palmolive-Peet Co. team was a close third with eleven wins and seven losses.

Trojan Products & Mfg. Co., Chicago, soaps and sanitary products, moved December 31st to new quarters at 3107 South Wabash Avenue, telephone number Vic. 7549. The Trojan plant has been considerably enlarged and more extended facilities are available.

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The first of a series of new detergents developed in the laboratories of the German I. G. has recently been introduced abroad. The new product is said to overcome some of the limitations of normal soaps in regard to solubility, behavior in hard water and detergent power.

Industrial Soap Co. has been organized in Milwaukee to manufacture laundry and industrial soaps. Twenty men are employed by the new concern which is headed by Herbert Kurth. Walter F. Borges, formerly with John Hanser Soap Co., Milwaukee, is vice-president.

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The protest of J. B. Wood Shipping Co. that soap in the form of dogs and cats should be held dutiable at 20% ad valorem as a non-enumerated article under paragraph 1459 of the 1930 Tariff Act instead of at 30% under paragraph 82 has been upheld by Justice J. McClelland in T. D. 17697. Testimony showed the articles in question were for ornamental of decorative purposes and unsuited for use as soap.

The Pepsodent and Palmolive radio programs were judged to be the best in their respective fields by a group of 132 radio editors in a survey conducted by the New York World Telegram. "Amos 'n' Andy" the Pepsodent feature, was chosen best by 77 out of 132 voters.

The protest of J. Anghel, New York, that "Elida" powdered soap, classified as a toilet preparation dutiable at 75%, under paragraph 61 of the 1930 Tariff Act, should be dutiable at 30% under paragraph 80 has been upheld by Justice J. McClelland in T. D. 17786.

Bradford Soap Works, Inc., Providence, R. I., has purchased six acres of property in West Warwick, R. I., located along the Providence-Williamntic railroad.

V. A. Acer, sales manager of Spencer, Kellogg & Sons, Inc., Buffalo, has been elected a director of the Buffalo Kiwanis Club.

Colonel Theodore Swann, head of Swann Corp., Birmingham, was re-elected president of the Birmingham Post, Army Ordinance Association, at the annual meeting.

Tulsite Chemical Co., Tulsa, Okla., which has undergone reorganization, recently occupied a building at Hale Station where it will engage in the manufacture of soap specialties.

Two Cleveland soap manufacturing concerns have recently suspended operations, these being A to Z Soap Products Co. and Lake Erie Soap Products Co.

The Liquid Soap Distributing Co., Ltd., has been organized in England to operate as a distributor of liquid soap. The principal director is S. D. Blair, 195a, Maida Vale, N. W., London.

Paul Watkins, president of the J. R. Watkins Company, who died recently at his home in Winona, Minn., at the age of sixty-seven years, had been a civic leader in that city for the past forty years. Mr. Watkins was born in London, Ohio, in 1864, and in 1892, joined the Watkins Company which was then headed by his uncle, J. R. Watkins, the founder. He became president of the company in 1911 and has headed it since that time.

Zanol Products Co., formerly American Products Co., Cincinnati, reports a net loss of \$41,445 for the year ended September 30, compared with a net income of \$152,258 in the previous year. This was the first unprofitable period of operation in twenty-five years.

ON PRODUCTS AND PROCESSES

Liquid soaps which do not discolor with age and which remain liquid down to minus eight degrees Centigrade, are potash soap solutions to which are added potassium acetate or potassium lactate.—British Patent No. 348,698.

-0-A soap containing 65 per cent hardened sunflower seed oil and 35 per cent rosin was equal in lathering power by the Stiepel number to a soap containing ordinary sunflower seed oil in place of the rosin. The soap with 35 per cent rosin had a good appearance and good detergent properties. These findings were made in Russia where a maximum of 15 per cent rosin is allowed in soaps. Soaps ordinarily made with hydrogenated sunflower oil mixed with unhardened sunflower oil, were found to be equal in all qualities where the unhardened oil was replaced by rosin. A soap of 60 per cent hardened oil and 40 per cent rosin had good detergency but was cloudy and somewhat soft. Hardened oil 65 per cent, unhardened oil 10 per cent, and rosin 25 per cent gave a very satisfactory soap.—Seifen. Zeitg., 58, 1931.

French patent No. 665,424 claims alphaabietinic acid as a new substance, said to be a valuable improver for soaps of all kinds. It is produced by treating rosin with oxalic acid and purifying the resulting mixture of acid and phytosterol by crystallization from alcohol.

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A soap designed to retain permanently large amounts of fat solvents, hydrocarbons such as benzene or terpenes, is manufactured by saponifying the fat with less than the storchiometric quantity of alkali in the presence of small quantities of an alcohol, for example, propyl or isopropyl alcohol.—British Patent No. 334,177.

Solubility of dry cleaning soaps, containing an excess of free fatty acid, is greater in potash soaps than in soda soaps, and oleate soaps are superior to palmitates and stearates. Solubility decreases in the following order: potassium oleate, potassium stearate, sodium oleate, potassium palmitate, sodium stearate, and sodium palmitate. Sodium stearate and palmitate are wholly unsuitable for dry cleaning soaps owing to jelling solu-

tions. Water, alcohol and free fatty acid assist solubility to an extent increasing in the order named, the action of the alcohol being due to its water content. The lower fractions of petroleum appear to be better soap solvents than the higher.

—Jour. Soc. Dyers and Colourists, 47, 1931.

A cleansing and wetting agent is manufactured from an aliphatic carboxylic acid below C_{10} , or its halide or glyceride, containing at least one double linking or OH group, which is esterified with nitrogen-free alcohol above C_5 (or its sufuric ester) and sulfonated before, during or after esterification. For example, lactic acid is esterified with octodecyl alcohol, cyclohexanol, or benzyl alcohol, distilled at 1 mm. and sulfonated in ether with sulfur chloride; or hexahydrosalicylic acid is esterified with octodecyl alcohol at 180 deg. in a current of nitrogen and sulfonated with 100% sulfuric acid.—British Patent No. 348,040.

A paste soap or cleanser is manufactured by adding successively to a soda tallow-vegetable-oil soap the following: glycerin or sodium silicate, borax solution, light mineral oil containing some solid petrolatum, powdered pumice, petroleum naphtha, and perfume as required—British Patent No. 347,433.

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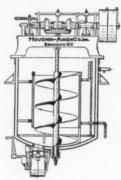
In a clip sheet mailed to automobile editors of news and trade papers by the Glycerine Producers' Association it is pointed out that by use of glycerine as an anti-freeze in automobiles, corrosion due to radiator rusting may be largely avoided. The data collected by the association in a series of laboratory tests shows that cars which have been serviced during the winter with radiator glycerine are less liable to deteriorate through radiator rust the following summer.

At a conference of drug retailers and wholesalers held early in December, the following motions were carried: condemnation of excessive free deals; free goods should be shipped with orders on which they apply; free goods should be shipped in unit shelf packages labelled as free. Resolutions adopted at the N. A. R. D. convention on combination deals were endorsed.

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Perfection Crutcher Cross Section View Plunger Type Valve



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NEW JERSEY

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RECORD OF TRADE-MARKS

The following trade-marks were published in the December issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

Gold-ite—This in solid letters against circular background describing polish and cleaner. Filed by B. & W. Chemical Co., Decatur, Ill., Oct. 2, 1931. Claims use since May 1, 1931.

Pinetrine—This in solid letters describing soap. Filed by Pinetrine Co., New York, Oct. 7, 1931. Claims use since January, 1931.

Southern States—This on diamond shaped reverse plate describing washing compound. Filed by C. H. Chemical Co., Danville, Va., Oct. 7, 1931. Claims use since Dec. 20, 1930.

Albodent—This in solid letters describing tooth paste. Filed by William R. Warner & Co., New York, Oct. 22, 1931. Claims use since Jan. 6, 1931.

Fly Skotch—This in solid letters describing insecticides. Filed by John Cowan Co., Bowie, Md., Oct. 23, 1931. Claims use since Sept. 1, 1929.

Fichtolin—This in solid letters describing shampoo and disinfectant. Filed by Fichtolin Mfg. Co., New Rochelle, N. Y., Oct. 23, 1931. Claims use since April 29, 1930.

Easyway—This in solid letters with picture of dishwasher describing powdered soap. Filed by N. Goodman & Son, New York, May 31, 1930. Claims use since May 22, 1930.

Metso—This on reverse plate describing cleansing compound. Filed by Philadelphia Quartz Co., Philadelphia, Sept. 15, 1931. Claims use since Oct. 10, 1930.

Kirkman's—This in shade letters with words, "Borax Soap," on wrapper, describing soap. Filed by Kirkman & Son, Inc., Brooklyn, Oct. 7, 1931. Claims use since 1837.

Nodis—This in solid letters describing soap. Filed by Borst Engineering, Inc., Buffalo, N. Y., Oct. 30, 1931. Claims use since Sept. 1, 1931.

Silhouette of ant eater describing ant poison. Filed by Antrol Laboratories, Inc., Los Angeles, Sept. 23, 1931. Claims use since July 1, 1931.

Lice-Ded—This in solid letters describing preparation for ridding birds of lice. Filed by Midway Chemical Co., Chicago, Sept. 24, 1931. Claims use since July 31, 1931.

Iso-Sudz.—This in solid letters describing liquid soap. Filed by Apex Products Corp., Chicago, Aug. 12, 1931. Claims use since Apr. 2, 1931.

Vanta—This in solid letters with drawing of baby describing castile soap. Filed by Earnshaw Knitting Co., Newton, Mass., Sept. 5, 1931. Claims use since Aug. 19, 1931.

Drawing of baby describing castile soap. Filed by Earnshaw Knitting Co., Newton, Mass., Sept. 5, 1931. Claims use since Aug. 19, 1931.

Vanta—This in solid letters describing castile soap. Filed by Earnshaw Knitting Co., Newton, Mass., Sept. 5, 1931. Claims use since Aug. 19, 1931.

Absorbine—This in solid letters describing soap. Filed by W. F. Young, Inc., Springfield, Mass., Nov. 9, 1931. Claims use since July 1, 1931.

Mixol—This in shaded letters describing insecticides and germicides. Filed by California Spray-Chemical Corp., Berkeley, Cal., Oct. 28, 1931. Claims use since July 8, 1930.

Gold Dust—This in solid letters together with representation of two colored children and descriptive material in Spanish on carton, describing washing powders. Filed by Gold Dust Corp., New York, Oct. 6, 1931. Claims use since Mar. 3, 1931.

Sentinel Suds—This in solid letters describing soap. Filed by Warren Soap Mfg. Co., Boston, Oct. 30, 1931. Claims use since Sept. 29, 1931.

Pat's Magic Fly Killer—This in solid letters together with drawings of flies describing insecticides. Filed by Edward William Roberts, Chicago, Sept. 22, 1930. Claims use since September, 1929.

Worcester—This in solid letters describing tooth paste. Filed by Worcester Salt Co., New York, Apr. 28, 1931. Claims use since Oct. 11, 1930.

Cream of Magnesia—This in shaded letters describing dentifrices. Filed by Viviny Laboratories, West Haven, Conn., June 16, 1931. Claims use since April, 1926.

Alex A. Petit—This in script describing dentifrice. Filed by Alexander A. Petit, New Bedford,

Mass., July 21, 1931. Claims use since April, 1929.

Pine-Trel—This in shaded letters describing fly repellant. Filed by American Turpentine & Tar & Co., New Orleans, La., July 23, 1931. Claims use since May 29, 1931.

Mercuroma—This in solid letters describing antiseptic. Filed by Mercuroma Co., St. Louis, Aug. 20, 1931. Claims use since Sept. 1, 1930.

Vap-O-Cake—This in solid letters describing disinfectants and deodorants. Filed by Kemiko Mfg. Co., Newark, N. J., Oct. 5, 1931. Claims use since Nov. 21, 1921.

Mars—This in outlined letters describing insecticide. Filed by Nyrda Products Co., New York, Oct. 17, 1931. Claims use since Oct. 1, 1921.

Tefra—This in solid letters describing tooth paste. Filed by Tefra Co., Wilmington, Oct. 23, 1931. Claims use since Oct. 1, 1931.

Letter "S" twined round anchor describing cleaning and scouring compound. Filed by Solvay Process Co., Syracuse, N. Y., May 14, 1931. Claims use since Sept. 29, 1930.

No. 500—This in solid letters describing cleansing compound. Filed by Solvay Process Co., Syracuse, N. Y., May 23, 1931. Claims use since Feb. 26, 1931.

Weil Bros.—This in old English letters on shield describing metal polish. Filed by Weil Bros., New York, Oct. 6, 1931. Claims use since July 12, 1931.

Swash—This in solid letters describing shampoo. Filed by C. W. Beggs, Sons & Co., Chicago, Nov. 4, 1931. Claims use since Sept. 3, 1931.

Kleenup—This in solid letters describing insecticides and germicides. Filed by California Spray-Chemical Corp., Berkeley, Cal., Nov. 7, 1931. Claims use since Mar. 8, 1924.

Trade Marks Granted

289,465. Antiseptics, Disinfectants, and Germicides. Micromerc Germicide Co., Los Angeles. Filed May 15, 1931. Serial No. 314,633. Published August 18, 1931.

289,474. Tooth Paste. Montana Mineral Products Co., Billings, Mont. Filed June 16, 1931. Serial No. 315,917. Published September 8, 1931. Class 6.

289,484. Shampoo. Coco-Pine Co., St. Petersburg, Fla. Filed May 22, 1931. Serial No. 314,-895. Published September 15, 1931. Class 6.

289,492. Disinfectant. S. Amos Mole, Buffalo, N. Y. Filed July 3, 1931. Serial No. 316,606. Published September 15, 1931. Class 6.

289,510. Insecticides and Deodorants. Orkin Exterminating Co., Atlanta. Filed July 1, 1931. Serial No. 316,539. Published September 15, 1931. Class 6.

289,511. Insecticide. Furst-McNess Co., Freeport, Ill. Filed July 6, 1931. Serial No. 316,635. Published September 8, 1931. Class 6.

289,547. Antiseptic. S & B Chemical Co., Asheville, N. C. Filed July 15, 1931. Serial No. 316,981. Published September 1, 1931. Class 6.

289,606. Liquid Shampoo. Nourishine Manufacturing Co., Los Angeles. Filed July 22, 1931. Serial No. 317,217. Published September 15, 1931. Class 6.

289,607. Insecticides. Sherwin-Williams Co., Cleveland. Filed July 23, 1931. Serial No. 317,-261. Published September 15, 1931. Class 6.

289,621. Shaving Soap and Sticks. Colgate-Palmolive-Peet Co., Chicago. Filed July 10, 1931. Serial No. 316,808. Published September 15, 1931. Class 4.

289,625. Shampoo. Jewel Oil Co., Jersey City, N. J. Filed July 15, 1931. Serial No. 316,968. Published September 15, 1931. Class 6.

289,628. Castile Soap. Madrina Corp., New York. Filed May 5, 1931. Serial No. 314,206. Published September 15, 1931. Class 4.

289,635. Sodium Meta Silicate for Use as a General Cleanser. Diversey Corp., Chicago. Filed June 6, 1931. Serial No. 315,488. Published September 8, 1931. Class 6.

289,638. Liquid Antiseptics and Disinfectants, Bath Salts, etc. Stern Brothers, New York. Filed June 11, 1931. Serial No. 315,707. Published September 8, 1931. Class 6.

289,671. Insect Repellant. Stanco Incorporated, Wilmington, Del. Serial No. 317,137. Published September 15, 1931. Class 6.

289,688. Polishing Preparation for Floors. Adams Wax Products. Mfg. Inc., St. Paul, Minn. Filed May 27, 1931. Serial No. 315,078. Published September 15, 1931. Class 16.

289,689. Metal Polishes, Cleansing Preparations, etc. Quality Products Laboratories, Richmond, Va. Filed June 12, 1931. Serial No. 315,773. Published September 22, 1931. Class 4.

289,694. Toilet Soap. Colgate-Palmolive-Peet Co., Chicago. Filed June 26, 1931. Serial No. 316,320. Published September 22, 1931. Class 4. 289,700. Soap. Fitzpatrick Bros., Inc., Chi-

289,700. Soap. Fitzpatrick Bros., Inc., Chicago. Filed July 16, 1931. Serial No. 316,995. Published September 22, 1931. Class 4.

289,712. Soap. Ben Schoefield Mfg. Co., New Orleans. Filed July 20, 1931. Serial No. 317,136. Published September 22, 1931. Class 4.

289,719. Antiseptic and Disinfectant. Harold H. Fries, New York. Filed July 18, 1931. Serial No. 317,080. Published September 1, 1931. Class 6.

289,724. Insecticide. Bonide Chemical Co., Utica, N. Y. Filed July 22, 1931. Serial No. 317.194. Published September 22, 1931. Class 6. 289,726. Liquid Shampoo. Huntington Labo-

ratories, Inc., Huntington, Ind. Filed July 23, 1931. Serial No. 317,248. Published September 22, 1931. Class 6.

289,904. Waterproof Wax Polish. Clean Surface Products Co., Chicago. Filed July 17, 1931. Serial No. 317,022. Published September 29, 1931. Class 6.

289,905. Metal Polish. Norn Co., Baltimore. Filed July 25, 1931. Serial No. 317,341. Published September, 1931. Class 4.

289,912. Dog Soap. Ralston Purina Co., St. Louis. Filed August 19, 1931. Serial No. 318,-169. Published September 29, 1931. Class 4.

289,941. Cleaning Compound. Southern Products Corp., New Orleans. Filed July 14, 1931. Serial No. 316,934. Published October 6, 1931. Class 4.

289,946. Cleaning Compositions. Dow Chemical Co., Midland, Mich. Filed July 30, 1928. Serial No. 270,311. Published September 29, 1931. Class 4.

290,011. Insecticide, Insect Repellant and Naphthalene. Barrett Co., New York. Filed July 1, 1931. Serial No. 316,521. Published October 13, 1931. Class 6.

290,013. Insecticide. Moth-No-Mor Corp., Chicago. Filed March 28, 1931. Serial No. 312,-743. Published September 29, 1931. Class 6.

290,079. Insecticide. Goodrich-Gamble Co., St. Paul, Minn. Filed April 30, 1931. Serial No. 314,001. Published October 6, 1931. Class 6.

290,085. Insecticides. S. F. Moulton, Los Angeles. Filed June 8, 1931. Serial No. 315,548. Published October 13, 1931. Class 6.

Soap Material Prices (From Page 23)

Spain during 1931 were of particular significance and cut deeply into essential oil production, especially in the case of spike lavender, thyme, rosemary. The likelihood of a serious interference with production in that country during 1932 owing to political unrest and economic readjustment to a Republican form of government, is great. The effect of this influence on the market may not be felt until late in 1932 or 1933. However, any concerted buying movement of Spanish oils may develop some fireworks in the market at any time.

At the year end, it was the general opinion in the essential oil trade that prices had been thoroughly deflated. Crops of a number of important perfuming materials have been reduced substantially this year due to the failure of producers to make a profit on recent operations. Any appreciable increase in demand might easily result in higher prices for the coming year as stocks are believed to be low on a number of widely used perfuming materials.

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys
PATENT AND TRADE-MARK CAUSES
402 Ouray Building, Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-mark Law will also be freely answered by these attorneys.

No. 1,830,969, Insecticide, Patented November 10, 1931, by Frederick W. Sullivan, Jr., and Elmer W. Adams, Whiting, Ind., assignors to Standard Oil Company, Whiting, Ind. An emulsion producing composition effective as an insecticide for plants and trees, comprising a mineral oil, an alkali-metal compound of sulfonic acids derived from mineral oil, a colloidal emulsifying agent, and water.

No. 1,831,610, Manufacture of Soap, Patented November 10, 1931, by Eugene Schuck, Los Angeles, Calif., assignor of one-fourth to George E. McCreery, Los Angeles, California. A process for the manufacture of soap with caustic alkali, which comprises admixing with the fatty materials a given weight of caustic alkali and a limited amount of water weighing not more than the weight of the caustic alkali, emulsifying the resulting mixture, and causing the saponification to take place under self-generation of heat to produce directly a finished soap of low water content.

No. 1,831,611, Ink Removing Cream, Patented November 10, 1931, by Benjamin Segall, New York, N. Y. A method for preparing an ink remover cream, consisting of mixing alcohol, peroxide, ammonia and soap together, permitting the mixture to main undisturbed for five minutes, then heating the same for twenty minutes to a temperative below the point of substantial volatilization lext cooling and then shaking till a cream forms.

No. 1,826,065. Insecticide and Fungicide Mixture. Patented October 6, 1931, by Karl H. Fulton and Marcus T. Inman, Jr., Pittsburgh, Pa., assignors to Clarence P. Byrnes, trustee, Sewickley, Pa. An emulsifiable liquid insecticide and fungicide composition containing a toxic oily liquid comprising partially oxidized hydrocarbons of the alphatic type in the range from alcohols to

(Turn to Page 69)

The demand for Munn Pale Wood Rosin has increased in direct proportion with the carefulness of recent buying habits.

Rosin makes a better cake of soap at a lower cost. Munn Rosin can be counted on for Cleanliness and Uniformity. A clean, uniform rosin is easier to use. Munn gives every batch of soap the same fine consistency as every other batch. Munn Pale Wood Rosin comes to

Munn Pale Wood Rosin comes to you just when you want it and just how you want it. Write for complete information. There's greater profit in the offing.

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NEWPORT

Plants: De Quincy, La.-Pensacola, Fla.-Bay Minette, Ala.

CONTRACTS AWARDED

John T. Stanley Co. bid 4.5c. pound on 1,000 pounds of scouring powder in a recent Brooklyn quartermaster's bidding. Another bid of \$1.31 a case was entered by Swift & Co.

Hunnewell Soap Co., Cincinnati, was awarded the contract for 1,000 cakes type B grit soap for Fort Riley in a recent St. Louis quartermaster's bidding at a price of 2.75c. Other bids were entered as follows: United States Soap Co., Cincinnati, 4.5c.; James Good, Inc., Phila., 4.9c.; and S. S. Pierce Co., Boston, 7.3c. D. E. Bolman Mercantile Co., Junction City, Kansas, was awarded 18,000 pounds ordinary unwrapped laundry soap for Fort Riley at 2.3c. pound. Other bids and bidders were: Iowa Soap Co., Burlington, Ia., 4c.; Colgate-Palmolive-Peet Co., Chicago, 3.31c.; Armour & Co., Chicago, 3.49c.; Swift & Co., Chicago, 3.8c.; and Procter & Gamble Distributing Co., St. Louis, 3.21c. Hudson & Thompson, Montgomery, Ala., was awarded the contract for 2,400 pounds ordinary unwrapped laundry soap for Maxwell Field at 2.14c. No award was made on 3,000 pounds type C scouring powder, for Fort Riley, purchase being made in the open

American Soap and Washoline Co., was awarded the contract for 32 barrels of powdered soap for Brooklyn army medical department in a recent bidding, the quotation being 4.88c. and 5.14c. Other bids and bidders were as follows: The Holbrook Mfg. Co., 5.75c.; Colgate-Palmolive-Peet Co., 5.5c.; John T. Stanley Co., Inc., 6.21c.; Beach Soap Co., 5.33c.; Armour & Co., 5.18c.; Swift & Co., Inc., 5.58c.; Unity Sanitary Supply Co., 6.5c.

Bids have been entered as follows on 200 quarts furniture polish for Washington U. S. Marine Corps: low bid, R. M. Hollingshead Co., Camden, N. J., 14c.; other bids and bidders: U. S. Sanitary Specialties Corp., Chicago, 18.5c.; Unity Sanitary Supply Co., New York City, 23c.; Hercules Chemical Co., Phila., 24c.; Quality Products Laboratories, Inc., Richmond, Va., 26.75c.; James Good, Inc., Phila., 16.4c.; Uncle Sam Chemical Co., N. Y. City, 16.6c.; Goulard & Olena, Inc., N. Y. City, 39c.; Green Oil Soap Co., Chicago, 36c.; Factory & Yard Supply Co., N. Y. City, 46c.

Hooker Electrochemical Co. was low bidder on 16,000 lbs. caustic soda for bureau of engraving and printing, Washington, with a quotation of 3.53c. in a recent bidding. Other bids and bidders were as follows: Harshaw Chemical Co., 3.65c. lb.; City Chemical Co., 3.87c.; H. H. Rosenthal Co., Inc., 3.765c.; Innis, Speiden & Co., 3.42.; John C. Wiarda & Co., Inc., 4.1c.; Morris, Eckles & Co., 3.84c.; Maryland Chemical Co., 3.65c.; Mathieson Alkali Works, 3.87c.

An individual selling and distributing soaps, has agreed in a stipulation with the Federal Trade Commission to stop advertising or labeling his soap products with fictitious statements concerning price or value, and from using fictitious names in advertising. He will also stop representing directly or indirectly that a physician was connected with the preparation of the formula or manufacture of his soaps, when such is not true. Other representations to be discontinued are use of the word "Antiseptic" to describe one of his soaps, so as to deceive buyers into believing that it contains antiseptic properties other than those usually found in cocoanut oil soaps; and advertising that a second brand of his soap contains olive oil and no acids or possesses the soothing qualities of castile soap, and is especially adapted for use on tender skins.

Exports of toilet or fancy soap from United States during October, 1931, amounted to 208,727 pounds, valued at \$46,733, as against 343,706 pounds, worth \$80,694, during the same month of 1930. Laundry soaps to the amount of 2,791,-293 pounds, worth \$176,290, were exported in October, 1931, as against 3,402,895 pounds, valued at \$236,649, during October, 1930.

Russian caustic soda has recently entered the Japanese market for use in rayon manufacture. Previously United States and Great Britain have supplied the greater part of the Japanese requirements.

Caustic soda exports from United States during October, 1931, amounted to 10,079,817 pounds, worth \$249,028, Japan being the largest buyer. Exports of soda ash were 3,898,930 pounds, worth \$58,347.



Market Report on

ESSENTIAL OILS AND AROMATICS

(As of January 11, 1932)

NEW YORK—Although trading in the essential oil and perfuming material markets was quiet throughout the closing weeks of 1931, a fair volume of business was reported during the first week of 1932, consumers appearing willing to replenish low stocks once the inventory season was passed. In spite of the rather better demand prices continued their downward trend. Bergamot was one of the prominent oils to be quoted lower, this in spite of the fact that recent reports point to a considerable strengthening of the Italian bergamot oil consortium. Java citronella oil was also lower, as was clove oil. Geranium oil and lavender oil were quoted lower in some quarters, although there was no general decline.

OIL ANISE

In a quiet market anise oil dropped 2c pound to a basis of 38c to 39c pound. The situation in

primary markets continues unsettled, but has not caused any recent advance in the local market.

OIL BERGAMOT

Reports received from Italy during the period were to the effect that a new decree has made membership in the bergamot consortium obligatory rather than optional. This strengthening of the powers of this group is eventually expected to lead to substantially higher prices on bergamot oil. The spot market showed no advance, however, dealers having heard too many reports of this type in the past, without any eventual result. As a matter of fact, quotations showed a further decline, dropping to a basis of \$1.85 to \$2.00 a pound.

OIL CITRONELLA

Continued weakness in the primary market brought another decline in Java citronella which was quoted this period at 49c to 50c pound. Ceylon oil continued unchanged at 36c to 38c pound.

TERPINEOL, C. P. Water White-Fine Odor-One of the Best Low Cost Odors for Soaps, Fly Sprays. Deodorizing Blocks, etc. MENTHOL, Synthetic White Crystals with Fine Natural Odor for mentholated shaving creams, soaps, Products of Schering.Kahlbaum A. G., Berlin shampoos, lotions, creams, **CAMPHOR** THYMOL Synthetic U. S. P. Crystals SCHERING CORPORATION New York, N.Y. Sole Import and Sales Agents in the U.S. A. for the Manufacturers. Stock Carried at New York

Water Soluble Perfumes for Theatre Sprays

LILAC W. S. ROSE W. S.

CARNATION W. S. JOCKEY CLUB W. S.

FRESIA W. S.

These oils are clearly soluble in water You will need only four ounces to one gallon

Also Special Odors for

Cake Soaps --- Liquid Soaps --- Disinfectants --- Para Products

Ask for Samples

POLAK'S FRUTAL WORKS, Inc.

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Chicago Office-16 South Peoria St.

NILES STEEL CONTAINERS





NILES Steel Container, your product makes a most favorable "first impression."
Where competition is keen, this sturdy steel guardian becomes an eloquent salesman as well.

Ask for convincing sample and prices.

Let us assist you in modernizing the appearance and increasing the protection of your products. Sizes and closures are offered to meet every need.

The Niles Steel Products Co.

Manufacturers

NILES STEEL CONTAINERS

NILES, OHIO

OIL GERANIUM

Bourbon oil again declined this period, falling to an inside price of \$3.55 pound.

OTTO OF ROSE

While some grades of otto of rose have been reduced recently, there has been no general decline. Prices now range from \$8.50 to \$15 an ounce, with the upper price limit being well maintained.

OIL SANDALWOOD

Local distillers continue to offer U S P sandalwood oil in this market at \$6.25 pound. The Mysore Government oil is now quoted at \$7.50.

Eric Coupey who for a number of years has been an importer and dealer in essential oils, trading under the name of Coupey Fils with offices at 109 Waverly Place, New York, has announced that hereafter he will act only as a broker to the trade for certain foreign producers.

The Bergamot oil consortium established in Italy in 1930 has been strengthened materially by a subsequent decree under date of October 15, 1931, which makes membership in the consortium obligatory rather than optional. The new Royal

Decree authorizes fines and confiscatory measures for producers who fail to deliver their oil of bergamot to the consortium. The original decree which authorized a general warehouse at Reggio Calabria was passed with the object of checking adulteration and stabilizing the bergamot market.

Magnus, Mabee & Revnard, Inc., New York, essential oils, announce the appointment of Louis D. Ettman as sales representative for the New England States, with the exception of the state of Connecticut which will continue to be covered from the New York office. Mr. Ettman will be located at the Company's new office at 1140 Little Building, Boston, Massachusetts. The new representative has had many years of experience in the wholesale drug trade, having formerly been assistant manager of the New York Office of Powers-Weightman-Rosengarten Company.

C. Ranganatha Rao Sahib, Mysore government trade commissioner, arrived in the United States early in December for a visit to W. J. Bush & Co.. New York, agents in the United States for the sale of Mysore Sandalwood oil. After a month spent in conferring with his agents and calling on the trade, Mr. Ranganatha plans to sail for England early in January.

Super Water Soluble Essences SPECIAL QUALITY

Essences brought to your knowledge in the November issue, we call your attention to the higher quality named above (special quality).

While these essences are more expensive, they nevertheless will give an equally low cost price for the reason that only $\frac{1}{4}$ oz. to $\frac{1}{2}$ oz. to a gallon will be required.

In addition to our Water Soluble The further advantage is that they will dissolve perfectly clear in water and that an addition of alcohol will not change the character.

> These essences will give satisfactory results for a great many purposes and we invite you to experiment with samples which we will be glad to supply.

GEORGE LUEDERS & COMPANY

New York 427 Washington St.

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COLUMBIA BRAND

98% - 100% CAUSTIC SODA

> Solid — Flake Ground — Liquid

76% Na₂O

99% - 100% SODA ASH

> Light — Dense Feather

58% Na₂O

THE COLUMBIA ALKALI CORPORATION

Executive Sales Offices
EMPIRE STATE BUILDING, NEW YORK CITY

Say you saw it in SOAP!

Market Report on SOAP AND DISINFECTANT CHEMICALS

(As of January 9, 1932)

NEW YORK-The past month in the market for soap and disinfectant chemicals has been given over largely to the closing of contracts for 1932 requirements which has proceeded in a fairly satisfactory manner, according to reports from suppliers. Little spot business has been done due to the desire of buyers to keep stocks low over the inventory period. Sellers expect a seasonal increase in buying over the coming month. In the alkali market prices have been held firmly at quoted levels, there being no tendency to repeat the performance of a year ago when prices were slashed sharply in an effort by some suppliers to secure additional tonnage. The glycerine market continues quiet with prices unchanged. Rosin prices were quoted lower this period in spite of the somewhat stronger statistical position of the market. Pyrethrum prices continue to be maintained at the higher levels which were quoted last month.

ALKALIS

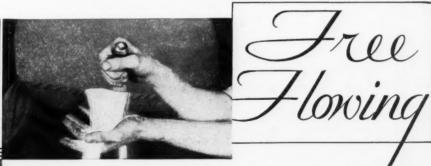
Sellers continued to work on 1932 contracts during the period just concluded. There were no reports of material reductions under the general level of quotations and sellers were fairly successful in getting the consuming market lined up for the coming year. The spot market has been quiet, but is expected to pick up somewhat now that the inventory season is past.

GLYCERINE

Continued warm weather through the eastern part of the country has held back sales of glycerine for anti-freeze purposes, causing a quiet market. Prices are unchanged at previously quoted levels.

COALTAR PRODUCTS

There was no expansion in sales of cresol or cresylic acid last month. Naphthalene producers confined the rattention to completing the writing of contracts for the 1932 season.



GRASSELLI





TRI-SODIUM PHOSPHATE

As our process permits Grasselli T. S. P. to cure, it is Free Flowing.

Non-Sifting Packages. Shipped to you in barrels with paper liner—no loss either in transit or storage. Also comes in kegs and bags. Grades—fine, globular, medium and coarse.

Let us figure on your T. S. P. requirements. If you are in a hurry, call up our nearest branch.

THE GRASSELLI CHEMICAL CO. INCORPORATED CLEVELAND

New York Office and Export Office: 350 Fifth Ave.

Albany Birmingham Boston Brooklyn San FranciscoCharlotte Chicago Cincinnati Detroit Milwaukee New Haven New Orleans

Philadelphia Pittsburgh St. Louis St. Paul

-576 Mission St. Los Angeles—363 New High St. Represented in Canada by CANADIAN INDUSTRIES, LTD., Heavy Chemicals Division, Montreal and Toronto 58



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yet always accomplished in

NIAGARA CAUSTIC POTASH

T is a known fact that Caustic Potash is difficult to produce in a pure state. Much more so, in fact, than is the case with Caustic Soda. Yet Niagara Caustic Potash is outstanding in excellence . . . always.

That is to be expected, for Niagara Alkali was the first in this country to manufacture this essential to soap-making. Today, Niagara is the highest grade of potash obtainable here or abroad.

The many years of close, expert attention we have given to the development of high quality Caustic Potash . . . and Caustic Soda . . . is your assurance of satisfaction.

NIAGARA ALKALI COMPANY

Associated with Electro Bleaching Gas Co. Pioneer Manufacturer of Liquid Chlorine

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NAVAL STORES

With arrivals very slack toward the year end and shipments somewhat larger, a decrease in rosin stocks was shown last period at southern ports, putting the market in better statistical position at the start of the new year. Nevertheless, lower prices were reported on most grades during the period, the closing schedule being: Gum Rosin, Grade B, \$3.50; H, \$3.80; K, \$4.30; N, \$5.80; WG, \$6.80; WW, \$7.30; Wood, \$3.70 to \$3.90.

PYRETHRUM

Insect powder quotations were maintained at the higher levels reached last month, varying somewhat according to seller and quality.

August Merz of Heller & Merz Corp., Newark, was re-elected president of the Synthetic Organic Chemical Manufacturers' Association at the tenth annual meeting. Other officers elected include: E. H. Kilheffer, E. I. du Pont de Nemours & Co., and Frederick G. Zinsser, Zinsser & Co., vice-presidents; Ralph E. Dorland, Dow Chemical Co., treasurer; Charles A. Mace, secretary, and members of the board, E. A. Barnett, John Campbell & Co., G. Lee Camp, Monsanto Chemical Works, and A. L. Van Ameringen, Van Ameringen-Haebler, Inc.

Directs Research for Warren Soap Co.

Lewis G. Warren has been placed in charge of research and development work for Warren Soap Mfg. Co., Boston, this being the first time since the death of Albert C. Warren in 1905 that a member of the family has been active in the management of the company. W. L. Drummond has been retained as retail sales manager and will direct a campaign for general distribution of Warren toilet goods products. One of the new products is a green castile type soap sold under the name "Purolivo," now being sampled extensively. A new laundry soap, "Sentinel Suds," has also been introduced as well as an olive oil shaving cream and a glycerine and olive oil tooth paste.

All sales by the American Druggists Syndicate division of Vadsco Sales Co. in northern New Jersey have been turned over to D. Kaltman & Co., Jersey City wholesale drug house, in the first step of what may eventually be a nation-wide change in its distribution system.

William S. Lyon, associated with Church & Dwight Co. for almost seventy years, died December 22 at his residence in Washington.



······

for your Dry Cleaning Soaps, Shaving Soaps, Special Cleaners, Liquid Soaps, Polishes, etc.



ACID STEAR

RED OIL

Elaine Brands Distilled Saponified FATTY ACIDS

EMERY INDUSTRIES, Inc., Cincinnati, Ohio

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Market Report on TALLOW, GREASES AND OILS

(As of January 11, 1932)

NEW YORK-Prices for soapmaking oils, fats and greases continued their downward progress during the period just closed, the whole list taking part in the wholesale reduction. The explanation offered by sellers was that inventory taking had cut down purchases in many industries, taking the market through its usual period of seasonal dullness. Soap makers were inactive on the buying side, although they are expected to show more interest over the coming month. Coconut oil was offered at a reduction on the coast due to lower copra prices. The local market also declined. Tallow dropped as a result of freer offerings. The cottonseed oil market was weak in sympathy with security and other commodity markets. No oil in the list showed an advance during the past month, and all but one or two registered declines.

COCONUT OIL

Both copra and coconut oil declined this period, the raw material being offered on the coast with fair success at prices fractionally under 2c, and New York tanks of Manila oil bringing from 35/8c to 33/4c pound. The market was seasonally quiet due to the comparative inactivity of soap makers.

CORN OIL

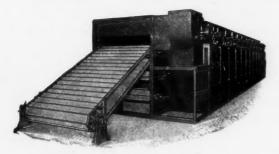
Willingness of sellers to make concessions brought the price of corn oil down this period, mill tanks closing at 3\% to 3\1/2c per pound. Competing markets were weak, accentuating the drop.

COTTONSEED OIL

Cotton oil prices dropped off again this period, falling close to the low points reached in October. P S Y was quoted 4 to 41/4c pound, with crude bid at 31/8c to 31/4c. The outlook for the coming season is for a substantial reduction in

The Sargent Three Swing Shelf Conveyor progressive stage

CHIP SOAP DRYING MACHINE



A MACHINE which is a factor of economy and a dependable actor in several soap plants. A machine of slight depreciation and large production. It is liked by attendants

as well as by the president of the company. Won't you investigate our offering on your next Chilling Roll and Soap Dryer?

C. G. SARGENT'S SONS CORP.

GRANITEVILLE

MASSACHUSETTS



BRINGING YOU

All the Advantages which Size Makes Possible . . .



Top: Kellogg's Copra Crushing Mills in Philippine Islands.

Docks at the modern Kellogg refinery— Edgewater, N. J.



*COMPLETE CONTROL
Spencer Kellogg and Sons buy their
own copra... maintain their own
crushing mills... Kellogg-owned
tank steamers transport the oil to
their great modern refineries... then
distribute it in their own tank cars to
warehouses in principal cities.

IN BUYING, in manufacture, in distribution, Spencer Kellogg and Sons are able to realize considerable economy. The reason: complete control* by the House of Kellogg.

These savings permit us to exceed the ordinary limits of care and expense involved in selection, storage and refining. We are able to make tests at every point. We can protect our standard of quality and insure absolute uniformity...yet supply coconut oils to you at a fair price.

We are zealous to maintain our standards, regardless of business conditions. Fairness to all alike is our rigid principle in the establishment and execution of terms of contracts; in the shipment of our products each customer receives the best quality and the best service of which we are capable.

SPENCER KELLOGG AND SONS SALES CORP'N.

Administration Offices and Research Laboratories BUFFALO, N. Y.

CRUSHING PLANTS—Manila, P. I. REFINERIES—Edgewater, N. J.; Kansas City, Kan.; NEW YORK OFFICES—Graybar Bldg.; WAREHOUSE STOCKS at Baltimore, Boston, Chicago, Cincinnati, Cleveland, Detroit, Kansas City, Milwaukee, New York City, Philadelphia, St. Louis.

Tank Wagon Service in Greater New York

Kellogg's Coconut Oils

MANILA Crude CRYSTALITE SILVER SEAL COCHIN KOLINE (Edible) HYDROGENATED

Say you saw it in SOAP!

production, but that factor is at present offset by the declining lard prices and the general weakness of that market.

GREASE

Weakness in the tallow market also affected grease prices. With increased offerings and a lighter demand, quotations on yellow grease dropped off to 21/2c pound. Buyers showed some interest in these low offers, but were not in need of immediate stocks.

TALLOW

Increased offerings of tallow in all markets after the first of the year caused another break in tallow prices, cityextra declining to $3\frac{1}{3}c$ pound in the New York market. This reduction in prices did not bring out any further buying interest as quotations on other competing soap raw materials were correspondingly reduced.

Whale Oil Sells at £10 10s.

The latest reported sale of whale oil from Oslo sent by U. S. Trade Commissioner at that city, was 17,500 barrels to continental margarin interests at a price of £10 10s. per ton. In addition, a sale of 7,800 barrels have been sold to Russia at a price of £20 with twelve months' credit and interest at 8 per cent. The sales were made by the Norwegian firm of Laboremus which is now reported to still have on hand about 16,000 barrels of oil unsold.

Reports to the Norwegian Whaling Association from current operations in the Antarctic by British and Argentine companies are meagre and of little significance. Later reports are being awaited with interest owing to the unusual situation in whale oil and the general fat markets this year.

Lard imported into the Republic of Ecuador now carries a duty of 10c. per kilo gross weight, according to an executive decree issued on November 27.

Fishery Industries of the United States is the title of a 550-page book just issued by Bureau of Fisheries, U. S. Department of Commerce.

The duty on oleo oil has been increased by Greece, effective on Dec. 19 last, from 50 metallic drachmas per 100 kilos to 70 metallic drachmas. With a surtax of 75 per cent of current duty added under recent decree, it brings the duty cost up to a total of 122½ metallic drachmas which is equal to about \$1.60 per hundred kilos.



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. . and mere sufficiency is not enough? Principles . . processes . . products . . and Silicates . . to earn their way to universal favor, and to standard practice . . require the edge on competition . . they must excel!

Just so . .

STANDARD GRADE

SILICATE OF SODA

has given that *extra* measure of resultful service, establishing it as the Soapmakers' ideal of composition, clarity and uniformity.



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T-SP

Users of Tri-Sodium Phosphate desiring a free-flowing, readily soluble product find Aero Brand meets their requirements.

Aero Brand Tri-Sodium Phosphate is manufactured with extra care. It is carefully cured and screened, and well packed to preserve its perfect mechanical condition.

Aero Brand T-S-P is shipped in non-sifting, paper lined packages and in drums, kegs, barrels and bags up to 325 pounds. Write for quotations.

Industrial Chemicals Division

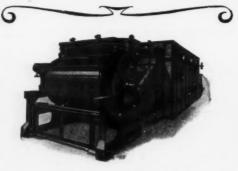


American Cyanamid Company
535 Fifth Avenue New York

CURRENT PRICE QUOTATIONS

Chemicals			Sodium Hydrosulphite, bblslb.	.22	.26
Acetone, C. P., drumslb. Acid, Boric, bbls., 99½%ton	135.00	.11 162.50	Sodium Silicate, 40 deg., drum, 100 lb. Drums, 60 deg. wks100 lb. In tanks, 15c. less per hundred, wks.	.75	.80 1.65
Cresylic, 97% dk., drumsgal.		.48	Tar Acid Oils, 15-25%gal.	.24	.28
97-99%, pale, drumsgal. Formic, 90%, techlb.	.54	.58 .12	Trisodium phosphate, bblslb.	.03	.03 1/2
Oxalic, bblslb.		.111/4	Zinc Oxide, lead freelb.	$.06\frac{1}{2}$.07
Adeps Lanae, hydrous, bblslb.		.15	Zinc Stearate, bblslb.	.18	.21
Anhydrous, bblslb.	.15 2.45	.16	Oils—Fats—Greases		
Alcohol, Ethyl, U. S. P., bblsgal. Complete Denat., No. 5, drums., ex. gal.		2.59 $.43\frac{1}{2}$.111/2
Alum. potash lumplb.	.03	.03 1/4	Castor, No. 1, bblslb. No. 3, bblslb.	.11 1/4	.11 72
Ammonia Water, 26°, drums, wkslb.		.0234	Coconut, tanks, N. Ylb.	.03 %	.03 3/4
Ammonium Carbonate, tech., bblslb.		.11½	Tanks, Pacific Coastlb.	.03 1/4	.03%
Bleaching Powder, drums100 lb. Borax, pd., cryst., bbls., kegston	1.75	2.35	Tanks, Chicagolb.	.03%	.04
	66.00	77.50	Cod, Newfoundland, bblsgal.	.25	.27
Carbon Tetrachloride, car lotslb. L. C. Llb.		.061/4	Copra, bulk, Coastlb.	.195	.02
Caustic, see Soda Caustic, Potash Caustic	100/2		Corn, tanks, millslb. Bbls., N. Ylb.	.03 % $.05 %$	$03\frac{1}{2}$ $05\frac{1}{2}$
China Clay, fillerton	10.00	25.00	Cottonseed, crude, tanks, milllb.	.031/8	.031/4
Cresol, U. S. P., drumslb. Creosote Oil tanksgal.	.10 1/2	.11	PSYlb.	.04	.041/4
	.06	.07	Degras, Amer., bblslb.	.031/4	.04
Formaldehyde, bbls	15.00	24.00	English, bbls lb. German, bbls lb.	$.04\frac{1}{4}$ $.03\frac{1}{2}$.04 1/2
Glycerine, C. P., drumslb.	.111/4	.1134	Neutral, bblslb.	.06%	.081/2
Dynamite, drumslb.	.09	.09 1/2	Greases, choice white, bbls., N. Ylb.	.03 1/4	.041/4
Saponification, tankslb.	.06	.061/2	Yellowlb.	.021/2	.02%
Soaps, Lye, tankslb. Hexalin, drumslb.	.05	$.05\frac{1}{2}$ $.40$	Houselb.	.02½	.02%
	_	35.00	Lard, prime, steam, tierceslb. Compound tierceslb.	.05%	.05 1/2
Kieselguhr, bagston	_	30.00	Lard Oil,		
Lanolin, see Adeps Lanae. Lime, live, bblsper bbl.	1.70	2.20	Extra, bblslb.	—	.07%
Mercury Bichloride, kegslb.	.93	1.08	Extra, No. 1, bbls lb. No. 2, bbls lb.	_	$.07\frac{1}{2}$
Naphthalene, ref. flakes, bblslb.	.03 %	.05	Linseed, raw, bbls., spotlb.	.0670	.0710
Nitrobenzene (Myrbane) drumslb.	.09 1/2	.11	Tanks, rawlb.	-	.0610
Paradichlorbenzene, bbls., kegslb.	.15	.23	Boiled, 5 bbls. lotslb.	_	.0790
Paraformaldehyde, kegslb. Petrolatum, bbls. (as to color)lb.	.38 .02	.39 .08	Menhaden, Crude, tanks, Baltgal.	-	.20
Phenol, (Carbolic Acid), drumslb.	.141/4	.16	Oleo Oil, No. 1, bbls., N. Y lb. No. 2, bbls., N. Y lb.	_	.06 %
Pine Oil, bblsgal.	.61	.66	Olive, denatured, bbls., N. Ygal.	.63	.65
Potash, Caustic, drumslb. Flakelb.	.06 1/8	.06% .08	Foots, bbls. N. Ylb.	.041/4	.041/2
Potassium Bichromate, caskslb.	.081/4	.081/2	Palm, Lagos, casks, spotlb.	.04	.041/8
Pumice Stone, powd100 lb.	2.50	4.00	Shipmentslb.	091/	.03 %
Rosins (600 lb. bbls. gross for net)—	2 50	2 00	Niger casks, spotlb. Shipmentslb.	.03 1/2	.03 %
Grade B to H, basis 280 lbs bbl. Grade K to N bbl.	$\frac{3.50}{4.30}$	$\frac{3.80}{5.80}$	Palm Kernel, casks, denaturedlb.	.051/4	.05 1/2
Grade WG and WWbbl.	6.80	7.30	Tank cars, denaturedlb.	_	.04 %
Woodbbls. Rotten Stone, pwd. bblslb.	3.70 .02½	3.90 .041/2	Peanut, domestic tanks, N. Ylb.	.04	.041/4
Silica, Ref., floatedton	18.00	22.00	Red Oil, distilled, bblslb.	.06%	.071/8.
Soap, Mottled 40 lb. boxlb.	-	.12	Saponified, bblslb.	.06%	.071/8
Olive Castile, bars, powderlb.	.12	.22	Tankslb.	001/	.05%
Powdered White, U. S. P lb. Green, U. S. P lb.	.14	.16	Soya Bean, domestic tanks, N. Ylb. Manchurian, Coast, tankslb.	$.03\frac{1}{2}$ $.03$	$.03\frac{3}{4}$ $.03\frac{1}{4}$
Tallow Chipslb.	.071/2	.08	Stearic Acid	****	.00/2
Whale Oil, bblslb.	.04	.041/2	Double pressedlb.	$.07\frac{1}{2}$.08
Soda Ash, contract, wks., bags, bbls.	01.101/	04.00	Triple pressed, bgslb.	.101/4	.10 %
Car lots	\$1.121/2	\$1.38 1.00	Stearine, oleo, bblslb.		.051/4
Soda Caustic, Cont., wks., sld100 lb.	_	2.50	Tallow, special, f. o. b. plantlb. City, ex. loose, f. o. b. plantlb.	.031/8	.03 1/4
Flakelb.	_	2.90	Tallow, oils, acidless, tanks, N. Y lb.		.061/4
Liquid, tankslb.		2.15	Bbls., c/1, N. Y		.06 34
Soda Sal., bbls100 lb.	1.05	1.15	Whale, nat. winter, bbls., N. Y gal.	.53	.55
Sodium Chloride (Salt)ton	11.40	14.00	Blchd., winter, bbls., N. Ygal.	.56	.58
Sodium Fluoride, bblslb.	$.07\frac{1}{2}$.081/2	Extra blchd., bbls., N. Ygal.	.59	.61





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Almond, Bitter, U. S. Plb.	2.25	2.50	Acetophenone, C. P lb.	\$2.50	\$3.00	
Bitter, F. F. P. A	$\frac{2.65}{.45}$	2.80 .47	Amyl Cinnamic Aldehydelb.	3.50	4.25	
Apricot, Kernel, canslb.	.26	.28	Anethollb.	1.20	1.40	
Anise, canslb.	_	-	Benzaldehyde, techlb. U. S. Plb.	.60 1.20	.65	
U. S. P., canslb.	.38	.39	Benzyl, Acetatelb.	.75	1.35 1.10	
Bay, tins	1.90	2.00	Alcohollb.	1.00	1.40	
Bergamot, copperslb. Artificiallb.	1.85 1.35	2.00 1.50	Citrallb.	2.10	2.40	
Birch Tar, rect., bot lb.	.45	.50	Citronellallb. Citronellollb.	1.75	2.50	
Crude, tinslb.	.13	.14	Citronellyl Acetatelb.	$\frac{2.50}{4.50}$	3.50 7.00	
Bois de Rose, Brazilianlb.	.60	.65	Coumarinlb.	3.60	4.00	
Cayennelb.	1.15	1.30	Diphenyl oxidelb.	1.15	1.25	
Cade, canslb.	.26	.27	Eucalyptol, U. S. Plb.	.75	.80	
Cajuput, native, tinslb.	.60	.65	Eugenol, U. S. Plb. Geraniol, Domesticlb.	$3.00 \\ 1.45$	4.00 2.00	
Calamus, betlb.	2.75	3.00	Importedlb.	2.00	3.25	
Camphor, Sassy, drumslb. White, drumslb.	.21 .16	.23 .18	Geranyl Acetatelb.	2.50	4.00	
Cananga, native, tinslb.	1.75	1.90	Heliotropin, domlb.	2.00	2.50	
Rectified, tinslb.	2.20	2.30	Importedlb. Hydroxycitronellallb.	2.50 3.50	4.00 9.00	
Caraway Seedlb.	1.55	1.65	Indol, C. Poz.	2.50	5.00	
Cassia, Redistilled, U. S. P., canslb.	.97	1.10	Iononelb.	4.00	6.50	
Cedar Leaf, tinslb.	.87	1.00	Iso-Eugenollb. Linaloollb.	4.00 1.95	$\frac{5.00}{3.25}$	
Cedar Wood, light, drumslb.	.35	.41	Linalyl Acetatelb.	2.50	3.25	
Citronella, Java, drumslb.	.49	.50	Menthollb. Methyl Acetophenonelb.	3.35	3.50	
Citronella, Ceylon, drumslb.	.36	.38	Anthranilatelb.	2.50 2.20	3.00 2.60	
Cloves, U. S. P., canslb.	1.15	1.20	Paracresollb.	4.50	6.00	
Eucalyptus, Austl., U. S. P., canslb.	.33	.35	Salicylate, U. S. P lb. Musk Ambrette lb.	.40 6.75	$\frac{.45}{7.25}$	
Fennel, U. S. P., tinslb. Geranium, African, canslb.	$\frac{1.00}{4.00}$	1.10 4.50	Ketonelb.	6.00	7.50	
Bourbon, tinslb.	3.55	4.00	Moskenelb. Xylenelb.	5.40	5.90	
Hemlock, tinslb.	.90	.95	aylene	2.75	3.00	
Lavender, U. S. P., tinslb.	1.85	3.50	Phenylacetaldehydelb.	\$5.00	\$7.50	
Spike, Spanish, canslb.	.55	.75	Phenylacetic Acid, 1 lb., botlb. Phenylethyl Alcohol, 1 lb. botlb.	$3.00 \\ 4.25$	4.00 4.50	
Lemon, Ital., U. S. P	.90	1.20	Rhodinollb.	6.00	9.50	
Lemongrass, native, canslb.	.44	.45	Safrollb.	.29	.31	
Linaloe, Mex., caseslb.	1.80	1.95	Terpineol, C. P., 1,000 lb. drslb.	.28	.30	
Neroli, Artificiallb.	10.00	20.00	Canslb. Terpinyl Acetate, 25 lb. canslb.	.33 .80	.34 .95	
Nutmeg, U. S. P., tinslb.	1.20	1.30	Thymol, U. S. Plb.	1.50	1.75	
Orange, Sweet, W. Ind., tinslb.	1.75	1.90	Vanillin, U. S. Plb.	4.50	5.75	
Italian coplb. Distilledlb.	1.85 .80	2.30 .90	Yara Yaralb.	1.60	3.00	
Origanum, cans, techlb.	.25	.40				
Patchoulilb.	3.75	5.50	Insect powder, bbls	.21	.23 1.70	
Pennyroyal, domlb.	1.55	1.60	Concentrated Extractgal.	1.50	1.70	
Importedlb.	1.10	1.15	Gums-			
Peppermint, nat. caseslb. Redis., U. S. P., caseslb.	$\frac{1.50}{1.65}$	$\frac{1.70}{1.90}$	Arabic, Amb. Sts lb.	.07	.071/2	
Petit Grain, S. A., tinslb.	1.10	1.20	White, powderedlb.	.12	.15	
Pine Needle, Siberianlb.	.60	.63	Karaya, powderedlb.	.16	.17	
Rose, Naturaloz.	8.50	15.00	Tragacanth, Aleppo, No. 1lb.	1.15	1.20	
Artificialoz.	2.00	2.75	Sortslb.	.25	.50	
Rosemary, U. S. P., drumslb. Tech., lb. tinslb.	.39	.43	Waxes—			
Sandalwood, E. Ind., U. S. P lb.	6.50	8.00	Bayberry, bgslb.	.16	.20	
Sassafras, U. S. Plb.	1.00	1.20	Bees, whitelb.	.34	.38	
Artificiallb.	.27	.29	African, bgslb.	.17	.18 .	
Spearmint, U. S. P	1.40	1.55	Refined, yellb.	.25	.30	
Thyme, red, U. S. Plb.	.50	.65	Candelilla, bgs lb. Carnauba, No. 1 lb.	.14	.15 .28	
White, U. S. Plb.	.85	.90	No. 2, Yellb.	.25	.26	
Vetivert, Bourbonlb.	4.50	5.00	No. 3, Chalkylb.	.11	.12	
Javalb.	16.00	20.00	Japan, caseslb.	.09	.091/2	
Ylang Ylang, Bourbonlb.	5.15	6.50	Paraffin, ref. 125-130lb.	.03%	.041/4	



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Lever Brothers, Ltd., and the Niger Co. have been denied the right to recover from Edward H. Bell and Walter E. Snelling £50,000 paid to these officials on their retirement from positions as chairman and vice-chairman of the Niger Co. This decision was rendered by the House of Lords to which the case had been appealed after a previous decision in favor of the Lever companies by the Court of Appeals. The decision, while denying the £50,000 recovery, does allow Lever Brothers to collect £1,360 and minor costs, the £1,360 being an amount said to have been earned by Mr. Bell and Mr. Snelling in palm oil trading which they conducted while still connected officially with the Niger Co.

Randolph Catlin, president of Gold Dust Corp., announces that the activities of its subsidiary, Best Foods, Inc., will be combined with those of Richard Hellmann, Inc., a subsidiary of General Foods Corp. The combination, which will operate under the name of Best Foods, Inc., will be the largest manufacturer of mayonnaise and salad dressing in the country.

Edward F. Swift has been elected chairman of the board of directors of Swift & Co., succeeding his brother, Louis F. Swift, who retired January 7 after completing more than fifty-five years in the packing business. The stockholders at their annual meeting increased the board to eleven members from nine, and William B. Traylor and John Holmes, vice-presidents, were elected to the directorate.

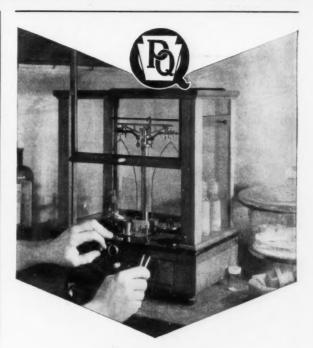
Bon Ami Co. will pay an extra dividend of 50c a share and the regular quarterly dividend of 50c a share January 17 to holders of class B common stock of record January 14. The usual quarterly dividend of \$1.00 on class A stock will be paid January 31 to stock of record January 14.

Wesson Oil & Snowdrift Company has reported a consolidated net profit of \$641,153 for the quarter ended November 30, 1931, comparing with \$707,313 for the same period in 1930. The net was equal to 50 cents per common share after preferred dividends as against 57 cents a share in the 1930 quarter.

New Patents

(From Page 49)

organic acids, and a toxic material having insecticidal or fungicidal properties capable of admixture therewith, the partially oxidized hydrocarbons being sufficient in quantity to spread the mixture in use.



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YOUR satisfaction with P. Q. Silicates begins with the first shipment and continues in increasing measure from year to year—it is cumulative.

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Oil & Fat Section

A section of SOAP devoted to oils, fats, waxes, and edible oil products, published prior to Jan. 1, 1932 as a separate magazine under the title, Oil & Fat Industries.

Commercial Applications of Diglycol Fatty Esters

By H. BENNETT

Glyco Products Company

HE esterification of poly alkyl glycols with oleic and stearic acids has produced two new and useful products. Diglycol oleate and diglycol stearate are now being produced commercially. Diglycol Oleate is a brown oily liquid having a marked odor. It is insoluble in water but soluble in alcohol, esters and hydrocarbons. It acts as a softener for rubber, resins and varnish gums. It is a liquid soap which is permanently non-alkaline and therefore will not affect colors and fibres. Its solubility in naphtha and other dry cleaning solvents makes it of interest in dry cleaners' soaps. It is an emulsifying agent giving water in oil emulsions which are of advantage in automobile and furniture polishes. By the addition of small amounts of alkali, the latter emulsions are inverted to oil in water emulsions.

Diglycol stearate is an almost white wax-like solid melting at 58°C. It is somewhat soluble in cold alcohol and hydrocarbons and very soluble when heated above its melting point. It is useful as an emulsifying agent which also is free from alkalies and amines. It disperses in water heated to 60°C. or over. A 3% dispersion gives a very viscous milky stable fluid. A 10% dispersion gives a soft white cream or paste.

Emulsions made with these diglyco esters may be used on cotton, wool, rayon, paper, leather, etc., for lubrication, flexibility and lustre. In industrial washing, it has been found that the addition of 4-6% of the stearate to ordinary soaps increases the life of the foam, produces smaller bubbles of a creamier consistency and greater

detergent powers. When used in toilet soaps, the skin is left in a condition such as is usually obtained with creams.

In soap manufacture, many different "superfatting" agents are employed. Unfortunately most of these tend to darken the color of the soap. Diglycol stearate when so used not only prevents darkening but tends to lighten the color slightly.

The oiling of wool necessitates the use of large quantities of oil emulsions. This procedure is necessary to increase the smoothness, flexibility and strength of the wool during the various manufacturing processes. Many of these emulsions because of improper formulation merely deposit a layer of grease or oil on the fibre without sufficient penetration. This prevents the proper lubrication of the fibre throughout its cross-section. Later in the "washing-off" process, the grease or oil is not completely removed and minute quantities remain on the fibre to oxidize and become rancid. Off odors are thus produced and the fibre is gradually weakened. Later in the dve-bath, imperfect dveing often results because of this. These troubles have been eliminated where a small percentage of these diglycol esters are incorporated in the oiling agents. Increased wettingout properties and increased emulsion stability also follow. In the washing out process, the addition of a small amount of weak alkali completely removes all oil and grease.

In wool washing, it is advantageous to first loosen the natural wool grease present before attempting to wash it out. This is accomplished by treating the wool with a diglycol ester plus 1% of alkali and warm water.

Thread breakage in weaving rayon, weighted silk and other fibres is practically eliminated by treatment with diglycol oleate to which some potash soap has been added. Increased tensile strength and flexibility is attained. Raw silk treated with these esters does not show spots when finished. Weighted silk is likewise made more resistant to temperature and humidity changes by a similar treatment.

Paints and inks containing pigments suspended in oil are prone to settle out on standing. The addition of about 2% diglycol stearate to such products keeps the pigment in much better suspension.

The addition of varying amounts of diglycol oleate to solutions of shellac, resins and varnish gums produces coatings of greater flexibility and tensile strength. Similarly it may be used with waxes in carbon papers, printing ribbons, etc.

In pharmaceutical and cosmetic preparations, lanolin is used extensively to form salves and ointments. These are greasy water-in-oil emulsions. By melting the lanolin with varying amounts of diglycol stearate, a base is obtained which will absorb large amounts of water (worked in cautiously) to give lustrous white ointments which may be washed off with water. These spread evenly, and are absorbed more readily by the skin because of their low surface tension.

U. S. manufacturers produced 23,439,119 pounds of uncolored margarin in October, 1931, a reduction of approximately 25% from the October, 1930, production of 31,022,184 pounds. The principal ingredient entering into this production was coconut oil of which 13,721,855 pounds were used in October, 1931.

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Whether cottonseed oil shortenings should be classed as lard substitutes or as vegetable oils for the purpose of fixing freight rates is a question which the Federal Trade Commission is now seeking to determine.

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E. J. Cornish, head of National Lead Co., was elected president of the Linseed Association of New York at the 64th annual dinner held in the Waldorf-Astoria hotel early in December.

John F. Jelke, founder of J. F. Jelke & Co., oleomargarin manufacturers, Chicago, died early in December at his home in that city.

National Oil Products Co., Harrison, N. J., is now offering a new product for the tanning industry known as "Tanoyl 1621."

Form Sulphonated Oil Mfrs. Assn.

At a meeting at Hotel Pennsylvania, New York, late in December representatives of twelve manufacturers organized the Sulphonated Oil Manufacturers Association. The following officers were elected for the first year: Charles P. Gulick, National Oil Products Co., president: Chester M. Braham, Arkansas Company, vicepresident; H. B. Sweatt, secretary and treasurer. The offices of the association will be at 55 West 42d street, New York. The association has been formed for the purpose of improving conditions both within the industry and between producers and consumers. To this end, a code of business practices will be adopted, industry statistics relative to production, sales, shipments and stocks on hand will be compiled and tariff and railroad rate matters also will be considered.

It will be the purpose of the Sulphonated Oil Manufacturers Association to work with other group organizations to simplify and standardize by nomenclature and method the various processes and measuring sticks used in buying and selling sulphonated oils. Charles P. Gulick, president of the association, said in announcing the incorporation of the association: "A prime factor in the organization of the manufacturers of sulphonated oils into a trade body is to improve marketing relationships between the producer and consumer. We plan as soon as possible to standardize analytical methods and have them accepted and recognized by the Bureau of Standards in Washington and the different consumer organizations."

The Sulphonated Oil Manufacturers Association is incorporated under the laws of New York State. Among the leading producers affiliated with the new organization as charter members are: Atlas Refinery; Arkansas Company; John Campbell & Co.; Consolidated Color & Chemical Co.; A. Klipstein & Co.; Martin Dennis Co.; National Oil Products Co.; Onyx Oil & Chemical Co.; Providence Drysalters Co.; Royce Chemical Co.; Salem Oil & Grease Co.; and L. Sonneborn Sons, Inc.

Norway has imposed a special tax of 0.10 crown per 100 kilos on all domestic and imported margarins and lard substitutes, with the additional stipulation that all margarins must contain a certain percentage of Norwegian butter.

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Imposition of a duty of 2c. per pound on coconut oil imported from the Philippines is provided for in a bill introduced in the U. S. House of Representatives by Charles R. Crisp of Georgia. No duty is suggested on copra. The bill would refund such duties to the Philippine Government.

SHORTENING

By P. E. MINTON*

Wesson Oil & Snowdrift Sales Co.

HE subject of shortening has, and always will be, a most important one to the baker, and while much has been written on the subject there is also a great deal still to be said.

In this article I will discuss the various kinds of shortening used in baking, their origin and something of their manufacture. I shall also discuss the application of shortening to the baking industry and to present some of the problems that the baker and the manufacturer have in common, in the proper selection, handling, and use of shortening.

Most bakers are aware of the fact that there are many kinds of butter, lard, compounds, margarines, and hydrogenated fats, but very few bakers have classified these or know their differences.

Butter holds a very important place in the bakery. It is graded for flavor and color and most bakers today are demanding the finest grade. Butter contains about eighty-three per cent fat, thirteen per cent moisture, three per cent mineral matter and one per cent milk solids. It has an individual flavor. The keeping quality of butter is limited.

There are four general classes of lard offered to the trade:

Open Kettle Rendered Lard is made from back fat and leaf lard and is rendered in an open kettle at a temperature of 250° to 260° F. It has a grainy body and an individual flavor which is very pronounced. It has an average free fatty acid content of .250% and a smoking point of about 400° F. The keeping quality is very good and this lard is sold to the baking trade and to the housewife.

Neutral Lard is made from leaf lard and is rendered at a low temperature of about 125° F. It has a grainy body and the low rendering temperature gives it a very mild flavor. It has a free fatty acid content of about .25% and a smoking point of about 380° F. The keeping quality is good. This lard is used mostly in certain types of margarine, but some is used by the baker.

Prime Steam Rendered Lard is made from killing and cutting fats and is rendered under a

steam pressure of about 40 pounds and a temperature of about 285° F. It has a smooth body and a lard flavor that is slightly milder than that of Open Kettle Rendered Lard. It has an average free fatty acid content of .50% and a smoking point of 370° F. The keeping quality is fair. This is the board of trade lard.

Dry Rendered Lard is made from killing and cutting fats and is rendered in vacuum at about 215° F. It has a smooth body and a flavor slightly milder than open kettle rendered lard. The free fatty acid content is about .30% and the smoking point is about 390° F. The keeping quality is good and this lard finds use in the bakery.

Hydrogenated lard has been manufactured and offered to the baking industry. However, there has not been much of this product used by the bakers and very little information is available regarding its characteristics and uses.

There are two classes of margarines used by the baking industry. These are made from various combinations of Beef Stearine, Oleo Oil, Cotton Oil, Nut Oil, Peanut Oil, and Milk. Margarines are offered with or without milk. The milk used in the manufacture of margarine is treated with a special culture and "cured" to develop flavor. The water content of margarine varies from 6% to 12% and the milk solids are about 4%. The first is rather stiff having a melting point of about 115° F. This is used in puff pastry goods. The other margarine used by bakers has a lower melting point, about 100° F. and is not so stiff. This is used for pies and rolled-in goods.

There are some of the vegetable oils being used as such by the baker. These find a place in certain kinds of breads, rolls and for divider, pan and trough grease.

We come next to the pure vegetable mixed shortenings or compounds. For the most part these are made from cotton oil. A portion of bleached oil is treated with hydrogen and the oil is converted into very hard fat commonly known as vegetable stearine. A portion of this stearine is blended with more bleached oil in the proper

^{*} In Daylight for Bakers, Dec., 1931.

proportions and this blend is run over the rolls. This fat has a very low free fatty acid content running about .04% and a smoking point of about 435° F. The keeping quality of this type of fat is very good. The flavor is neutral and the body smooth. This type of fat finds use in most all bakeshop work.

The baker also uses a fat that is a compound of lard animal fats in the form of beef stearine or oleo stearine and cotton oil. These fats have a free fatty acid content of about .1% and a smoking point of about 415° F. The flavor is very mild and the body smooth. The keeping quality is good. This type of fat finds general use in the bakery.

The latest development in the manufacture of fats for the baker has been the pure hydrogenated fat. This fat has been used by the bakers for some time and has readily found its place as the highest type shortening used by bakers. It is produced by hydrogenating cotton oil to a point where the proper hardness and melting point is reached. The hydrogenating process is there stopped and the fat is further processed to produce the proper plastic body required. Since the whole of the fat is hydrogenated there is no compound of two or more fats. The fat is uniformly the same throughout. This fat has a very low fatty acid content, about .025%. It has a very high smoking point of about 455° F. The odor and flavor are neutral and the body very plastic and smooth. The keeping quality is better than any other type of fat and it is adaptable to every requirement of shortening in a bake shop.

There are a number of initial requirements for shortening set up by the experience of the baker. Some of these requirements apply to all baked goods and others are specific in certain classes of goods. I will discuss the more important ones.

The color of shortening, as it seen in the tierce, is not necessarily a guide to the effect it will have upon baked goods. In the cases of compounds, vegetable shortenings and hydrogenated fats, an amount of air is beaten into the shortening. The amount of air will vary from 10 to 12% of the volume of the fat. The finer the air particles, and the more air incorporated, the whiter the shortening.

Butter is used principally for flavor and it is expected that the flavor of butter be carried to the baked goods. This is true in some cases with lard. In most bakeshop work the shortening used should be as neutral of flavor as possible. This is particularly true of mildly flavored goods. Where a strong flavored shortening is used it is necessary to increase the quantity of flavor used to a point that is usually objectionable.

The plasticity of the shortening used has a decided influence on the distribution of fat in the baked goods. Also it influences the keeping quality of the goods, the creaming quality of the fat, the emulsification value and adaptability of the shortening. In fact, we cannot expect to find any of the characteristics of a good fat where plasticity is lacking except the color, flavor and keeping quality.

Certainly, shortness is one of the characteristics required of a good fat. No satisfactory laboratory method has been devised for the measure of shortening values of various fats. Those who have worked on this subject at various times seem to thoroughly disagree with each other as to methods and results. It seems necessary to measure this requirement by actual shop practice. Upon this characteristic depends the eating quality, palatability and keeping quality of the baked goods.

Modern bakeshop methods and formulas require that a shortening be uniform. The baker is striving constantly for uniform, high quality goods and he can expect his product to be only as uniform as the ingredients he uses.

The baker today is attempting to reduce the number of ingredients carried in the store-room. The shortening most desirable to him is the one which can be used to advantage in as many bakeshop products as possible. His demands upon the shortening manufacturer are that one shortening be made that is best used in all the baker's products. The characteristic of adaptability of a shortening to various uses is very desirable.

Much has been said about the creaming quality of shortening and I will not attempt to add to what has gone before. I should like to remind you, however, that the structure of the creamed mass is the foundation of the texture of the finished cake.

Appreciable quantities of moisture in the form of water, milk and eggs are added to the cake dough. This requires that the shortening have a high emulsification value. New methods for mixing cake and pie doughs depend a great deal upon this characteristic.

Good shortening must be stable. In deep fat work a high smoking point is required and this smoke point must remain high as the fat is used. Fat should not be subject to rancidity. Certain types of baked goods, cookies and hard cakes, for instance, are not consumed in a short time after baking and, therefore, must remain sweet and free from rancidity while in the bakers' or grocers' store and in the home before being consumed.

The baker has given considerable thought to the storage of most of his ingredients but has for the most part neglected his shortening. This is

due probably to the nature of the package and the fact that fat is not very perishable. However, from a production point of view it is very important that shortening be stored in the proper manner. We know from experiments that 75° F. is the proper temperature for creaming shortening and sugar. If these two ingredients are too warm, then the creaming temperature will not be at the best. This will affect the volume and texture of the finished cake. If the shortening is too cold then trouble will be experienced in The creamed mass may be lumpy creaming. and the cake will possibly have "shortening spots." It requires between 72 and 80 hours for a tierce of shortening to change temperature throughout. Sufficient time should be given for the shortening to adjust itself to the desired storage temperature. At this place I would like to call your attention to the large area presented by the open end of a tierce to foreign material. Shortening containers should be kept carefully covered while open in the ingredient room. All fats are capable of absorbing odors and the baker should never store shortening where it will be subjected to strong odors.

In order that a fat be edible and capable of being assimilated by the human body, it must be so constituted that it can be broken down. All edible fats and oils can be broken down. It has been a difficult problem for the shortening manufacturer to produce a shortening that would have the maximum keeping quality and the maximum digestibility. Some fats are far more stable than others but all fats should be handled in a manner permitting the least abuse. In deep fat frying the fat should be filtered and renovated as often as possible. Care should be taken not to permit the fat to reach a temperature higher than necessary at any time.

The baker gives a lot of thought to pan grease and divider oil. For pan grease animal or vegetable fat is usually used. This should be of the highest smoke point possible to prevent smoke in the oven. Divider oils are both mineral and edible or a mixture of the two. In cases where mineral oil is used for dividers or pans the baker should be sure to obtain an oil of the highest quality since the poorer grades sometimes impart a very disagreeable odor to bread.

Some baking experiments have been using Lecithin with the shortening. Indications are that this material has merit and possibly may find a practical application to baked goods. I do not know of the use of Lecithin in routine work in the bakeshop up to this time.

From season to season the varying temperatures will have more or less effect upon the consistency of the baker's shortening. The fat manufacturer recognizing this condition varies the melting point of his product accordingly. This change in melting point is made very gradually so that the baker's routine is not affected. This variation in melting point is very small but has been a great help to the baker and manufacturer. Of course, a similar difference in melting point exists between shortening delivered in the colder climates and that delivered in the warmer localities.

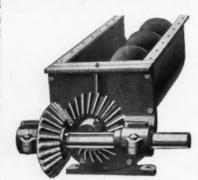
A great deal of attention has been given to the package in which shortening is delivered. Most shortening producers believe that their product is only as good as the package in which it is shipped. This belief originated from at least two sources. The producer must deliver his product in a clean and wholesome condition. package must reach the baker undamaged and clean. Also, there is an appeal to a good package—the same as there is to a good cake icing. All packages are carefully inspected and prepared to eliminate the possibility of damage by foreign material. Good, sound, well prepared packages only are used. It is rare, if ever, that one finds a second-hand package used for shortening. All packages are code marked so that it is possible to check the freshness of the shortening whether in the manufacturer's stock, distributor's stock or in the bakery.

In conclusion, I want to say that the shortening manufacturers are manifesting great interest in their product and its application to the Baking Industry. Concerted effort on the part of the producer has improved, and will further improve, the manufacturing methods and the adaptability of his product in the bakery. Open-minded study has solved the problems the baker and manufacturer have in common and we expect this fine work to continue.

-0-

Certain experiments by the government of the Union of South Africa in the development of tung trees in the vicinity of Graskop, in the eastern Transvaal district of Pilgrims Pass, are arousing considerable interest, according to advices received by the United States Department of Commerce. It is stated that, while it is not known how far the government is prepared to go, every assistance is being given to definitely establish whether these trees can be grown in the area under observation.

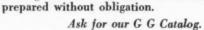
While it has been recently stated that there are only 100 tung trees in all of the Union with a majority at Magut in the Pongolo Valley, where large expenditures are to be made on irrigation, officials indicate that there are over 2,000 tung trees in the Union, mostly in the Transvaal, with the larger number in an area where extensive expenditures on irrigation are unnecessary as the rainfall has proven quite ample.



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Indian Empire As a Market for Vegetable Ghi

Product of European Margarine Factories Entering Extensively into Competition with Native Clarified Butter

By J. Bartlett Richards*
U. S. Trade Commissioner at Bombay, India

EGETABLE Ghi, which was practically unknown in India until seven or eight years ago, has become a staple of considerable importance, and in addition to the substantial imports, there is beginning to appear some interest in manufacturing it within the country. This is a natural development, inasmuch as the raw material comes mainly from India and the product is sold almost entirely in India. Up to the present time, however, the manufacture has taken place in the margarine plants of Holland, where it has formed an apparently profitable side-line. It is controlled by Uni-Lever, a merger of the principal margarine producers in Holland and Germany with Lever Bros., the British manufacturers of soap and other products. Imports have fallen off a little in the past year or so, but are still substantial. Projects to build plants in India will probably result, however, in reducing imports to a very moderate figure. Imports during the fiscal year ended March 31, 1930, and during the first nine months of the current fiscal year are as follows:

	1927-28	1928-29	1929-30
12 months—Quantity in cwts. (112 lbs.)	444,431	458,184 17,727,352	$\substack{321,126\\12,005,160}$
	1928	1929	1930
9 months—Quantity in cwts. (112 lbs.)	362,553 14,051,773	271,620 $10,184,580$	221,187 $8,391,691$

Vegetable ghi is made somewhat similarly to margarine, by the use of churns, but is rather different in appearance and quality, being more solid, with a higher melting point, and slightly granular in texture. It is not colored, the white being preferred as more closely resembling genuine ghi, which is a clarified butter made from cows' or buffaloes' milk. An analysis of a typical sample of imported vegetable ghi is as follows:

Mois	ti	11	re	2																		0.19%
Fat																				. ,		99.81%
Ash								,	,													Nil
Sp.	G	r	a	V	i	t	V															0.9025

^{*} Published by permission of Foodstuffs Division, U. S. Dept. of Commerce.

Melting Point																			40.48°C
ACCELINA I OTHE						*	*		٠	•		*	٠		*	*	•		
Acid Value											,			*				0.0	0.57
Saponification	Va	lu	le																200.50
Iodine Value .							*												57.40
Recheirt M. V.	alu	9																	1.59
Melting Point	of	A	10	ig:	ta	12	s)	2 .											128°C

All vegetable ghi is substantially the same, and the above analysis would apply generally, in spite of the fact that ghi is imported under a hundred or more different brand names. The large number of brands is due to the fact that each importer insists on having the exclusive agency for certain brands, even though they all come from the same factory or group of factories. Thus we have Lily, a well-known brand, competing against Veejam, Peacock, Cow, Basket, Charka, Ganpati, Tiger, Mohini and dozens of others, varying somewhat in price and possibly a little in quality, since most importers have three or four for them by advertising, since there has been little effort so far to advertise vegetable ghi and it is exceptional for the ultimate purchaser to call for it by brand name. In fact, probably over 80% of it is mixed by dealers, using one or more brands of vegetable ghi with a little genuine ghi and selling it either as a mixture or more frequently, especially in the small towns and villages, as genuine ghi. Uni-Lever, Ltd., largest suppliers of vegetable ghi, realize that this situation is to their disadvantage, since it does not permit their product to become known to the public, and they plan accordingly, as soon as production is well under way from their projected plant in India, to start propaganda for the use of vegetable ghi under its true colors.

There has been a little sporadic agitation to stop adulteration, and possible some success has been achieved in a few of the larger cities, but nothing much has been heard of it for some time and in fact, throughout the demand in recent months for the use of swadeshi and the boycott of foreign goods, vegetable ghi has apparently been less affected than many other imported commodities. It is certain that the production of pure ghi is sufficient to meet only a portion of the demand and vegetable ghi is generally recog-

nized as a harmless and, in fact, nutritious adulterant, which cannot be said of adulterants used prior to its introduction, only seven or eight years ago.

Vegetable ghi is imported by five European companies and about a dozen Indian distributors, who forward their orders through a factory representative of Uni-Lever stationed in India. The product is shipped in 40 pound tins, similar in size and shape to 4-Imperial-Gallon kerosene tins, two tins to the case. The current cost of the best quality is Rs. 22* per case c.i.f. Bombay (or about 10c. per lb.), in addition to which there is a duty of Rs. 4-2-0 per case (about \$1.50) and other charges aggregating possibly Rs. 1 per case, making up a total cost of about Rs. 27-2-0 per case (about 12c. per pound), delivered in the importer's godown in Bombay. The importer sells to small wholesalers in the bazaar, who in turn sell to very small retailers. The price to the wholesale dealer for typical brands is as follows:

 Veejam
 Rs. 30-8-0 (about \$.14 per lb.)

 (10 cases and above)

 Pencock and Cow Brands
 Rs. 28-8-0 (about \$.13 per lb.)

 Lilly
 Rs. 32-8-0 (about \$.14 % per lb.)

There is little supervision over the trade and it is believed that in many cases the wholesaler mixes vegetable ghi with real ghi which is purchased from farmers, frequently selling the mixture as real ghi. The small bazaar-keeper, purchasing this mixture, mixes it again with vegetable ghi, so that the proportion of real ghi in the product sold to the ultimate consumer is not great.

Indian-made vegetable ghi of good quality, not being subject to duty, is able to undersell the imported brands, the current quotation for the best quality being Rs. 24 per case of 80 pounds (about \$.11 per pound). Real ghi is sold at Rs. 103 per cwt. (112 pounds) (about \$.33½ per pound) for the well-known Porbunder ghi, made by farmers and land-owners in Kathiawar, down to Rs. 82 (about \$.268 per pound) for ordinary Gujerat ghi. Ghi mixed with vegetable ghi is sold at various prices, ranging down to the price of plain vegetable ghi.

Vegetable ghi is made in India by two concerns. Neither is prepared to state the amount of its present capacity but it is believed that the one has a capacity of 40 to 50 tons a week and the other possibly half as much. The Uni-Lever representative is considering the establishment of a plant in India, with a capacity of possibly as much as 200 to 300 tons a week, and it is very probable that work will at least have been started on the installation before the end of 1931. An Indian commission house has recently purchased a well-equipped oil mill in Bombay, with both ex-

pellers and presses, and is considering the possibility of manufacturing vegetable ghi. In view of the competition among oil-seed crushing plants, it appears that it will be the general practice for manufacturers of vegetable ghi to purchase their supplies of oil rather than to attempt to crush the seeds. Groundnuts (peanuts) are the favorite source of oil for vegetable ghi, though cocoanut, castorseed, linseed, tilseed, safflower and other seeds are used in combination. Cottonseed is not much used.

Ghi, whether genuine, mixed or vegetable, is generally displayed by the bazaar dealer in kerosene tins made to contain four Imperial gallons. In view of the high melting point of either type, it does not require refrigeration, even in the hot weather experienced in India. It is sold by the seer (1/40 of a maund, which is 28 pounds in Bombay Presidency and 82 pounds in most other parts of India), or fraction of a seer, purchasers generally supplying their own containers.

Unilever Wins Whale Oil Suit

The suit of two leading Norwegian whaling companies, Polaris and Globus, against Unilever, Ltd., in London, in which the whalers claimed that Unilever had contracted for their entire output in 1930-31 and which the margarin company refused to accept, ended in a victory for Unilever in the British court. The suit was based on the fact that the whalers used tank boats to ship oil from the Antarctic in addition to the normal capacity of the fleet. The normal capacity of the fleet was held to be about £483,000 value of oil at £25 per ton while that which they attempted to deliver to Unilever amounted to £875,000, the difference being due to the use of the tank steamers in addition to regular carrying capacity. The court held that the capacity of the whaling fleet constituted its normal production and that in shipping the tankers of oil in addition, the Norwegians had broken their contract and that Unilever was not bound to accept any oil at the contract price. From the time the fleet left for the Antarctic following the making of the contract at £25 per ton, the price dropped steadily, going as low as £8. At the time the fleet returned to European waters, the open market price for whale oil was £13 per ton against the contract price of £25. Heavy losses to the Norwegian whaling interests have resulted from the decision.

Duties on lard, margarin, and other edible fats imported into Poland are now materially higher following a new regulation issued on Nov. 20

^{* \$1} equals Rs. 2.77—Re. 1 equals 361/2 cents.

Whale Oil Versus Tallow

(From Page 27)

the 1929-1930 and the 1930-1931 seasons in the Antarctic. The contract price was £25 per ton of 2240 lbs. (about .06 1/6 per lb. duty paid and landed N. Y.). Of course they predicated this commitment on the allowance made for a reasonable increase in the catch of whales. Production in the last two seasons as has already been stated was so much greater than had been anticipated that coupled with reduced requirements for oils and fats in general, consumers were forced to call a halt by announcing that they would be entirely out of the market for a year. In other words, that they could not be regarded as potential buyers of whale oil produced during the 1931-1932 season. There resulted an abandonment of plans for sending out the fleets to Antarctic waters this past fall and a decision by the different companies to lay up their vessels. Operations had ceased during the spring and summer in the other lesser important fields because of the unprofitable returns realized. However, two prominent British firms departed from the otherwise unanimous decision and have dispatched to the Antarctic several floating factories and their complements of whale catching auxiliaries on the alleged grounds that they had need of new supplies of fresh oil for edible purposes. One company with three floating factories and one land station in operation as well expects to produce 350,000 barrels this coming season according to a recent report from the Consulate General at Oslo.

Of the surplus stocks carried over from last season, sales have been made at prices much less than anything paid by the "buying pool" when it made its commitments two years ago. According to a dispatch from Oslo under date of September 1st, the sale of 6,000 tons to Russia had been negotiated at a price of approximately \$.03 per lb. for bulk deliveries in tank steamers and \$.036 for shipment in drums. Later in the same month, a sale of 10,000 tons (60,000 bbls.) was closed with a British oil company at £15 or \$.031/4. per pound f.o.b., Norwegian points of shipment, the Commercial Attache at Oslo informed the Bureau in a recent letter. The price currently quoted late in November for foreign whale oil was \$.03½ duty paid c.i.f. N. Y. No recent sales of consequence have been reported, the market being regarded as nominal as of the date cited.

World's Production of Oils and Fats

BASED on the latest statistical information for all countries for which the data are available 28,623,000,000 pounds of oils and fats were produced throughout the world in 1929. This figure

is necessarily a rough estimate and does not include an unknown volume of fatty materials that never reach organized channels of trade. Animal oils and fats represent one-third of this production; vegetable oils approximately 61%; fish oils less than one per cent and whale oil as previously mentioned about 5%. In the field of animal oils and fats, tallow (including edible) accounts for 6.8% which represents the combined productions of U.S., Canada, Argentina, Brazil, Uruguay, New Zealand and Australia (statistics lacking for other countries might augment the tonnage somewhat but probably would affect the percentage but little). Three quarters of the world's tallow supplies is the product of rendering and packing plants in the United States. For the United States alone the total of white, yellow and brown greases produced approaches 2% of the world total for animal oils and fats production.

We can visualize from the foregoing the vast dimensions of the world's oils and fats industry and the part we play. And thus we come logically to the next question: how much of this huge quantity of oils and fats furnishes the fatty ingredients for the American soap industry?

Substantial Proportion Enters Soap Kettle

THROUGH a canvass of consumption in seven major and a group of miscellaneous industries for 1929, the Bureau of the Census determined total consumption of slightly less than 41/4 billion pounds exclusive of butter. Therefore, if we deduct the quantity of butter estimated to have been churned in the world that year,—6,392,000,000 pounds,—we find that the United States provided consumptive outlets for approximately 19% of the available supplies of oils and fats entering international trade. A little more than three-eighths of this latter quantity, or to be exact 381/2% was diverted to the soap kettle; hence, the soap industry of this country was the consumer of 71/4% of the commercial output of the world in animal (except butter), vegetable and fish oils in 1929.

The following table depicts the relative status of the principal fatty materials entering into the manufacture of soap in the United States. Numerous other oils and fats make up the remaining 7% of the supplies.

(in 1,000 pounds	.1	
Total Consumption	1,681,953	Per Cent of Total
Tallow (inedible)	. 451,835	27.9
Coconut and palm kernel oils	. 438,446	27.0
Palm oil	. 178,851	11.0
Cottonseed oil	. 167,033	10.3
Greases (animal)	. 154,288	9.5
Whale oil	. 71,022	4.4
Fish oils		3.7
	1,521,087	93.8

A very small amount of edible tallow may have been included with the inedible in the above tabulation. Palm kernel oil included with the coconut oil comprised but 10% of the total weights for these oils. The cottonseed oil is "foots" from refining operations. The greases are white and yellow hog and brown greases, as only trifling quantities of other types enter into soap products. The fish oils comprise menhaden, herring and sardine of domestic origin with some sardine and pilchard oil imported.

Once more referring to the Census Bureau's report on "Factory Consumption of Oils and Fats" for 1929, we learn by the process of a little arithmetic that the requirements of our soap industry in that year were served by the diversion to such consumption of the major oils and in the percentages below:

Tallow,	inedible		 		88%
Greases (animal)		 		68%
Palm oil			 		90%
Coconut a					
Cottonsee	d oil (fo	oots) .	 		12%
Fish oils					
Whale oil			 	1	00%

(To be concluded)

Soap Builders (From Page 33)

<code>hydroxyl</code> ion represented by 0.1 unit of pH is not constant. Thus the difference in actual concentration of hydroxyl ion between a solution of pH 10.1 and one of pH 10.2 is less than one-fourth as much as the difference between a solution of pH10.8 and one of pH 10.9. For comparative purposes, therefore, the pH values have been calculated to $\rm C_{OH}$ values assuming pH 7.0 at 25° $\rm C = \rm C_{OH}$ $\rm 1.0 \times 10^{-7}$ and these are included in Table I. Calculation to $\rm C_{OH}$ in this way shows the wide difference between all of these salts and sodium hydroxide, which is not so clearly shown by pH values.

The electrometric titrations shown in Figure I illustrate the behavior of the builders on reaction. These titrations were carried out with the hydrogen electrode and since 0.033% solutions are so dilute as to give results of questionable accuracy, the solutions were made up to a concentration of 0.66%. While the actual concentrations of hydroxyl ion were higher than those occurring in laundry practice, the results serve for comparative purpose. Figure II gives the corresponding results in terms of C_{OH}. The curve for sodium hydroxide could not be shown in that case as it is so far off the scale.

We believe that the usefulness of a soap builder in the wash wheel continues only so long as it maintains an alkalinity in the solution greater than that corresponding to a pH of 10.0 or a

Con of 0.0001. This is based on the fact that the soap solution alone has a pH of 10.2 so that to be effective the builder should not decrease the alkalinity. A comparison of the different builders after reaction with varying amounts of acid is shown in Table II (on page 83) in terms of C OH According to this table, the 1:1.58 sodium silicate would retainsilicate would retain its effectiveness against acidity for the longest times in the wash wheel although the concentration of alkali produced by it is never as strong as that produced under the same conditions This comparison is not by metasilicate. strictly correct because the 1:1.58 silicate and 1:3.86 silicate were taken on an anhydrous basis. Allowing for that, sodium metasilicate is by far the best soap builder of those considered up to this point, aside from sodium hydroxide.

Caustic soda is the strongest alkali of the materials used as builders and it is popular for that reason in some sections. The objection to its use is the harmful effect on fabrics that results when it is not thoroughly neutralized or rinsed out before drying. It must also be used very carefully since only very dilute solutions may be used on fabrics with safety. Any danger to fabrics is greatly reduced when buffered salts are used, and materials of this sort are preferred by many laundries even when their effectiveness is not as great, as in the case of modified soda. The ideal soap builder would be one which is potentially strongly alkaline but at the same time buffered so as to yield all of its alkaline strength only on reaction. From consideration of the three grades of sodium silicate examined in comparison with the other salts, it seemed that a silicate with the highest possible ratio of Na₂O to SiO₂ would most nearly approach this specification.

From work of Harman⁶ it is indicated that the orthosilicate, having a ratio of Na₂O to SiO₂ of 2:1, exists in solution although he was unable to obtain it as a dry salt. Since the Na₂O content in this compound is higher than in the metasilicate the alkaline strength would be greater although buffered in the same way. Harman's results also showed that the pH of a solution of the 2Na₂O:SiO₂ salt was only slightly higher than that of a solution of the 1:1 ratio salt so that the initial concentration of hydroxyl ion would not be dangerously high. Sodium orthosilicate therefore appears to be a material which will furnish practically the greatest amount of alkalinity compatible with safety for use as a soap builder.

A solution corresponding to a 0.033% solution of sodium orthosilicate was made up from sodium metasilicate and sodium hydroxide and its alkalinity measured in the same way as with the other solutions. The initial pH was found to be

^{6.} R. W. Harman, J. Phys. Chem. 29, 1155-68 (1925).

TABLE I.

Initial Concentration of Alkali in Solutions of Builder With and Without Soap at 25°C.

		% solution of ilder alone	builder-	solution of 0.1% solu- of soap
	pH	C _{OH} .	pH	C_{OH}
Sodium hydroxide	11.85	7.10×10^{-3}	11.9	7.94 x 10 ⁻³
Sodium metasilicate	11.2	1.60	11.3	1.99
Alkaline trisodium phosphate	10.8	0.63	11.1	1.26
Sodium silicate 1:1.58 (anhydrous)	10.7	0.50	11.0	1.00
Sodium carbonate	10.65	0.45	11.0	1.00
Sodium silicate 1:3.86 (anhydrous)	10.1	0.12	10.4	0.25
Modified soda	10.0	0.10	10.3	0.19
Borax	9.35	0.022	9.8	0.063
Sodium oleate	10.2	0.16		

TABLE II

Concentration of Hydroxyl Ion After Reaction With Varying Amounts of Acidic Materials From Fabrics

	. Mo	oles acidic m	naterial remov	ed
	0.0005	0.001	0.0015	0.002
Sodium metasilicate	0.008	0.007	0.0043	< 0.0001
Alkaline trisodium phosphate	0.003	< 0.0001		
Sodium silicate 1:1.58 anhydrous)	0.002	0.0006	0.0002	0.0001
Sodium carbonate	0.0006	0.0001	< 0.0001	
Sodium silicate 1:3.86 (anhydrous)	< 0.0001			
Modified soda	< 0.0001			
Borax	< 0.0001			

11.3 as compared with 11.2 for sodium metasilicate. The corresponding C_{OH} values are 1.99 x 10^{-3} for orthosilicate as compared with 1.60 x 10^{-3} for metasilicate. The titration curve is included in Figures 1 and 2 for a 0.66% solution and shows the distinct superiority of this solution over that of the metasilicate in total alkalinity above the pH 10.0 level.

While a considerable volume of data has been published on sodium silicates the information available on the silicates with high sodium oxide content is meagre. A definite compound with the formula Na₄SiO₄ was inferred to exist from data on solutions. During the course of our experimental work, Kracek¹⁰ published work on sodium silicates in which he described the preparation of sodium orthosilicate in crystalline form. From the data on its alkalinity in solution, it is probable that such a salt, available at a price within the range of the other builder compounds, would be superior for laundry use.

10. F. C. Kracek, J. Phys. Chem. 34, 1583-98 (1930).

Conclusion

A PRIMARY consideration in the selection of a salt to be used for increasing the detergency of a soap solution is alkalinity produced by it on hydrolysis. Comparison must be made on the basis of the total alkaline strength available after reaction has proceeded to some extent, as well as on the basis of the initial hydroxyl ion concentration before reaction. Based on the consideration of both of these factors, a sodium silicate having a Na₂O:SiO₂ ratio of 2:1 would be the most effective addition agent. Aside from that, the most efficient material available on the market is sodium metasilicate, having a Na₂O:SiO₂ ratio of 1:1.

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United States exported 11,168,495 pounds of caustic soda during September, 1931, this material having a value of \$293,911.

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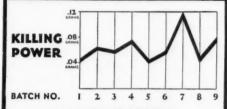
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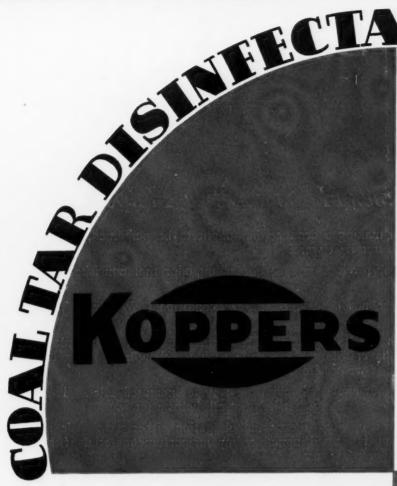
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MA SECTION

INSECTICIDE DISINFECTANT S E C T I O N



A Department of SOAP

SOAP is official publication of *The Insecticide and Disinfectant Manufacturers Association*.

Harry W. Cole, Holbrook, Mass., Secretary.

A Standard

A MOVEMENT is underfoot, we understand, for suggesting to the Insecticide & Disinfectant Manufacturers Association that some type of standard for liquid pyrethrum insecticides be adopted officially and be recommended by the Association to large buyers of insecticides as a safeguard against inferior and ineffective products. It is reported that certain limits as determined by the Peet-Grady Method for testing the killing power of liquid insecticides, would be set and all products meeting the requirements would be considered as satisfactory according to the proposed Association standard.

We admit that a standard of this kind would be far from perfect from the technical point of view, but we do believe that it is something with which a practical beginning can be made. We believe that it could protect buyers against products with a very low kill, and could give to buyers and industrial consumers some reasonable basis on which to purchase liquid insecticides.

Coloring of Poisons

THREE bills have been introduced in Congress calling for the discoloration of poisonous substances commonly used as insecticides, fungicides, fumigants, and the like, and which are or can be commonly mistaken for foodstuffs such as flour, salt, baking powder, etc. The bills which we understand are being sponsored by the flour

milling interests aim at the tinting of the common poisons, such as fluorides, arsenicals, and mercurials, as a means of preventing accidental poisoning. The legislation is similar to the regulations recently adopted by the New York City Board of Health covering sodium fluoride.

This legislation is undoubtedly a step in the right direction, provided it does not conflict in details with local legislation which has been worked out carefully and adopted after due consideration such as the New York City regulations. We have particular reference to the color or colors adopted for the poisons. Nile blue, as designated by the U.S. Bureau of Standards, is the official color in New York for sodium fluoride. It was chosen after a thorough investigation and there are numerous reasons for its adoption. We suggest to those fathering this national legislation that this color, for the sake of standardization and prevention of confusion, should also be specified for the tinting of white arsenic, mercurials, and others, as well as sodium fluoride,—a single tint to be associated everywhere with the poisons.

In the national survey of drug stores and the products which they sell, now being undertaken by the Department of Commerce, we suggest that some specific attention should be given to insecticides and disinfectants as a class. We believe that a request directed from the Association of the industry to the Department would undoubtedly receive every consideration.

The Insecticide and Disinfectant Manufacturers Association

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INSECTICIDE & DISINFECTANT MANUFACTURERS ASSOCIATION

Harry W. Cole, Secretary

HOLBROOK

MASS

Notes of the Trade

U. S. Sanitary Specialties Corp., Chicago, has been appointed United States representatives for Pastoxine, a product for rodent extermination, recently developed by Pasteur Vaccine Laboratories, Paris. The company is announcing the details of this representation elsewhere in this issue of *Soap*.

Dr. Robert C. White, who recently completed a two year term as president of the Insecticide & Disinfectant Manufacturers Assn., has been renamed commodore of the Schuylkill Navy for 1932 without opposition. Dr. White is a member of the Undine Boat Club. His other rowing interests involve membership on the Penn Athletic Club Rowing Committee, also the Olympic Rowing Committee, which will be in charge of all Olympic boat races.

Dr. Alfred Weed, entomologist of John Powell & Co., New York, attended the annual meeting of the Southern Branch of the Entomological Society, held at New Orleans during the week of Dec. 28.

An important Government contract has been secured by Restar (Ltd.), a New Zealand manufacturing company to supply disinfectants to all government institutions for a period of 12 months. This is the first time a New Zealand company has secured the opportunity to provide large quantities of goods to the Government in this particular line.

Alpine Chemical Co., Baltimore, has just issued a thirty-page catalogue listing prices and complete instructions for use of all the sanitary products which it supplies.

Production of its insecticide "Flyded" will be greatly increased at the new plant of Midway Chemical Co., which has just been opened at 5235 West 65th street, Chicago. An extensive advertising program on this product is now under way.

Zonite Products Corp. enjoyed a good year in 1931, earning its yearly dividend in the first ten months, according to a report by Ellery W. Mann, president.

A. S. Boyle Manufacturing Co., floor waxes, is erecting a new building in Windsor, Ont., to house its entire plant.

Recent Developments in Disinfection

By Dr. EMIL KLARMANN*

Chief Chemist, Lehn & Fink, Inc.

THE following is a review of some of the more important contributions to the literature on disinfection and antisepsis published in the course of the past year. As in previous years this report restricts itself to a brief description of some selected papers without considering the total research and patent literature on the subject.

Phenol Coefficients

PAPER of considerable importance, dealing with the comparative evaluation of the germicidal action of tar-oil and cresylic disinfectants, was published by C. M. Brewer and G. L. A. Ruehle (1-a). The authors showed among other things that the phenol coefficient determined with B. typhosus is not a criterion of the effect against other pathogenic bacteria. A particularly distinct discrepancy in bactericidal action upon B. typhosus and Staphylococcus aureus respectively was found in the case of the tar oil disinfectants, the bactericidal effect upon B. typhosus being considerably greater than upon Staphylococcus aureus; this discrepancy was much less pronounced in the case of the cresylic preparations.

Synthetic Organic Compounds

As early as 1895, Parry Laws called attention to the considerable germicidal potency of phenyl-aliphatic acids; he found that their antibacterial effect increased with increasing molecular weight. This investigation is the starting point of the work of T. C. Daniels and R. E. Lyons¹ who were interested in the relation between the bactericidal action of the phenylaliphatic acids, and a number of physical factors, such as partition coefficient, adsorption on carbon and surface tension. Such a relation was actually found in the case of acids from phenylacetic acid on. Benzoic acid showed an anomalous behavior, its germicidal effect being between that of the phenyl-valeric and phenyl-caproic acids.

Further work was done by J. Sabalitschka on the antiseptic action of esters of parahydroxybenzoic acid.² Among certain substituted glycerol esters, substances of great germicidal potency were found.³ Considerable attention was devoted to organic compounds of phenolic character. In this group some interesting products of great bactericidal strength were synthesized.

P. Kuhn⁴ studied the germicidal action of the mono- and dichloro derivatives of carvacrol. Both compounds were found to be very effective particularly against Staph. aureus, and compared favorably with the corresponding chlorothymol derivatives. The bactericidal potency showed considerable variation, depending upon the type of emulsifier used. Incidentally some of these emulsifiers are derivatives of the parent compounds from which the chloro-derivatives are made, e.g., sodium carvacroxyacetate or sodium thymoxyacetate.

A number of symmetric hydroxydiphenylsulfides were prepared and studied by F. Dunning, B. Dunning and W. E. Drake.⁵ The sulfides are derived from the following initial compounds: phenol, resorcinol, m-cresol, parachloro- and parabromophenol and thymol. The germicidal value appears to be increased about ten times as compared with the corresponding phenols, except in the case of the resorcinol derivative where the effect is increased only 3.5 times. F. W. Tilley, A. D. MacDonald and J. M. Schaffer report o-phenylphenol to be an efficient bactericidal agent for the germ of tuberculosis.⁶

The first part of an investigation of the antibacterial action of monoethers of dihydric phenols, dealing with the derivatives of resorcinol, was published by E. Klarmann, L. W. Gatyas and V. A. Shternov. In this series a number of very potent compounds were found. A distinct relation was established between the bactericidal effect and the chemical constitution as well as a difference in the behavior toward the test bacteria (Staph. aureus and B. typhosus) used.

Certain higher alkyl derivatives of hydroxyindan-1,3-dione and hydroxy-1,3-naphthindandione are potent inhibitory agents according to the findings of R. Black, H. Shaw, T. K. Walker, A. J. Suthers and L. L. Roe.⁸ Benzothiazole offers some promise as an antiseptic according to preliminary indications as reported by M. T. Bogert and H. G. Husted.⁹

Trichlorocresol is the active principle of a new disinfectant "Terbolan" recently introduced by the I. G. Farbenindustrie in Germany. It is designed primarily for large scale disinfection and

^{*} Reporting for Scientific Committee, Insecticide and Disinfectant Mfrs. Assn.

is said to be effective not only against vegetative bacteria but also against anthrax spores.10

Organic Dyes

GOERNER and F. L. Haley published the A. results of an extensive study of the bacteriostatic and bactericidal action of pyridium in vitro.11 Continuing the series of his well known researches on the antibacterial action of dyes, J. W. Churchman reported upon the comparative ineffectiveness of Neutral-red and Bismarckbrown.12 According to a U.S. Patent of the Ostro Research Laboratories, 13 dyes obtained by coupling diazotised aminophenols with metadiamines are germicidal, particularly for staphylococci. An interesting investigation by H. Linden and F. K. T. Schwarz¹⁴ has to do with the photodynamic effect of certain dyes.

Soaps

In continuation of his work on soaps of substituted fatty acids, A. H. Eggerth studied the germicidal action of alpha-mercapto and disulfo soaps upon several bacteria.15 J. E. Walker expresses a very favorable opinion of the antibacterial action of soap and attributes to its use an important role in the prevention of the spread of diseases.16

While B. Hampil reported previously that certain highly germicidal phenol derivatives may be rendered ineffective by the addition of small amounts of soap, it is found now that the action of mercuric chloride upon staphylococci is enhanced considerably by the addition of soap.17 No increase of the germicidal action was observed, however, in the case of organisms of the colon-typhoid group and of other bacteria. If on the other hand soap was added to mercuric cyanide or orthochloromercuric phenol, the antibacterial potency was increased three to four without any selective times action Staphylococcus.

Essential Oils

SEVERAL papers on the bactericidal action of essential oils and their constituents were published recently. E. K. Rideal, A. Sciver and N. E. G. Richardson demonstrated the relation between the capillary activity and the germ killing capacity of a number of pure constituents of essential oils.18 The effect of ozonization on the germicidal action of rhodinol, linalool and pinene was the subject of the investigation by A. Morel, A. Rochaix, J. Doeuvre and R. Guillot. 19 It was found that this treatment effects a considerable increase of the bactericidal potency; the spontaneous rise of antibacterial efficacy of certain oils on aging, therefore, is attributed to ozonization.

R. E. Miller determined the phenol coefficients of several essential oils and of their mixtures. With some mixtures a better effect was obtained than one would conclude from the sum of the components.20

Metals and Metalorganic Compounds

THE action of a number of metal salts upon bacteria was studied by K. Tauchert with very interesting results.21 Salts of silver, copper, gold and platinum were found to be most effective in restraining bacterial growth, a distinct action being noticeable in concentrations as low as m/4,000,000. No direct relation was found between the valency and germicidal action. Grampositive and Gram-negative bacteria showed differences in susceptibility to the action of the metal salts.

A number of papers were published on the preparation and the action of organic mercurials. G. Meissner studied the relation betwen the chemical constitution and germicidal action of alkyl- and aryl- mercuri-haloids and -hydroxides.22 A systematic investigation of the effect of chemical constitution upon the toxicity of mercurials was carried out by E. Fourneau and K. I. Melville.23 Mercuriated derivatives of halogenated resorcinol sulfonphthaleins were studied by E. Drake, F. Dunning and J. J. Novak,24 those of thiosalicylic, thiophenylsulfonic, thiophenylacetic and other thio-acids by J. H. Waldo, H. A. Shonle and H. M. Powell.25 "Merthiolate" is the sodium compound of ethylmercurithiosalicylic acid;26 it shows certain properties which make it suitable for tissue antisepsis.

Other Antibacterial Effects

B. P. Ebert and L. H. Peretz²⁷ studied the action of radium emanation upon bacteria and filterable viruses. Audible sound waves of very high pitch produced by rapid vibration of a nickel tube are capable of killing bacteria according to O. B. Williams and N. Gaines.28 It will be remembered that a similar observation with inaudible sound waves has been made by Loomis some time ago.

References

- 1-a C. M. Brewer and G. L. A. Ruehle, Ind. & Eng. Chem. 25, 150 (1931).
- ¹T. C. Daniels and R. E. Lyons, Journ. of Physical Chem. 35, 2048 (1931).
- J. Sabalitschka, Pharm. Acta. Helv. 5, 286 (1931).
- ⁸J. Sabalitschka, Arch. f. Pharm., 269, 228 (1931). ⁴P. Kuhn, Arch. f. Hygiene, 105, 19 (1931).
- ⁵ F. Dunning, B. Dunning and W. E. Drake, Journ. Amer. Chem. Soc., 53, 3466 (1931)
- ⁶ F. W. Tilley, A. D. MacDonald and J. M. Schaffer,
- Journ. Agric. Res., 42, 653 (1931).

 ⁷ E. Klarmann, L. W. Gatyas and V. A. Shternov, Journ. Amer. Chem. Soc., 53, 3397 (1931).

(Turn to Page 105)

Testing Commercial Insecticides by Use of Composite Samples

By Dr. Charles H. Peet*

EDITOR'S NOTE: To eliminate the apparent confusion which resulted from the attempt of the Insecticide Standardization Committee to set forth briefly in one report a summary of the present status of biological testing procedures for the evaluation of the insecticidal efficiency of finished household insecticides, this report as published here has been altered by the committee to cover only the results obtained when house flies (Musca domestice) were used as test insects.

T is fairly obvious, within limits, that different subject animals might be employed in the determination of the physiological activity of a substance. Thus the duration of local anesthesia may be determined by the action of the anesthetic upon the dog, the cat, the rabbit, the horse, etc., and, as a matter of fact, fish are sometimes used for this purpose. Similarly, it is entirely possible that any insect could be chosen for the testing of insecticides. But, as has been pointed out in previous reports of this committee, it is highly desirable to choose as the test insects, creatures whose life histories are not only known but under control. That is, such things as age, re-

sistivity, ease of manipulation, etc., are matters of considerable importance. Consideration of all factors involved lead Grady and Peet to the conclusion that the house fly best satisfied all requirements.

This conclusion has not been unanimously subscribed to and your committee is perfectly frank to concede that it lacks omniscience and that there may be more suitable test insects. However, the dependability and reproducibility of tests upon other insects remain to be corroborated whereas we believe that there is a substantial mass of evidence that "fly" tests do furnish a reliable index which is reproducible in any properly equipped laboratory. Accordingly, without entering into any controversy regarding the superiority of one testing procedure over another or the interpretability of tests on one insect in terms of another, your committee submits the following findings regarding the standard which prevails at present—these findings being based upon the "fly" test as applied to the composite insecticide samples upon which a preliminary report was made at the June meeting in Chicago.

You will recall that forty single pints of each of six of the principal insecticides on the market were combined into six composite samples which should have represented quite accurately the run of the market on each of these six products.

The following table gives the results obtained by the fly testing method which is familiar to most of you:

* Chairman Insecticide Standardization Committee, Report before Insecticide & Disinfectant Mfrs. Assn., New York, Dec., 1931.

TABLE I

Sample	Avera	age per cent	down in 10	mins.	Avera	ge per cent d	ead after 24	4 hours
	1	2	3	4	1	2	3	4
Α	.99.0	99.1	94	100	63.4	60.7	61	39.4
В	. 98.8	99.2	92	100	70.8	79.1	63	45.2
C	. 99.5	99.3	94	100	60.5	63.4	58	49.3
D	. 98.8	99.1	95	86	72.7	72.5	73	52.4
E	.98.7	99.3	95	88	67.2	64.0	69	59.5
F	.98.1	99.1	94	96	64.8	55.4	64	68.3

Inspection shows that the "knockdowns" do not present sufficient variation to permit rating of the insecticides on this basis. On the other hand there are significant variations between the "kill" values for the different samples. The following chart presents these results graphically:

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Forest Bouquet No. 42 4.00	Trefle No. 619 2.85
Carnation No. 50 5.00	Trefle No. 157 6.00
New Mown Hay No. 319. 2.75	Violet No. 611 3.10
New Mown Hay No. 75 5.00	Wild Flower No. 5300. 1.75
Oriental No. 88 5.00	Wild Flower No. 113 5.00

In addition to the odors listed we also have many others ranging in price from \$1.25 to \$8.00 lb.

Guaranteed not to decompose or change in odor, no matter how long they remain in contact with the chemical.

All of our Paradichlorbenzene odors are supplied with or without color.

Used one pound to one hundred pounds of crystals.



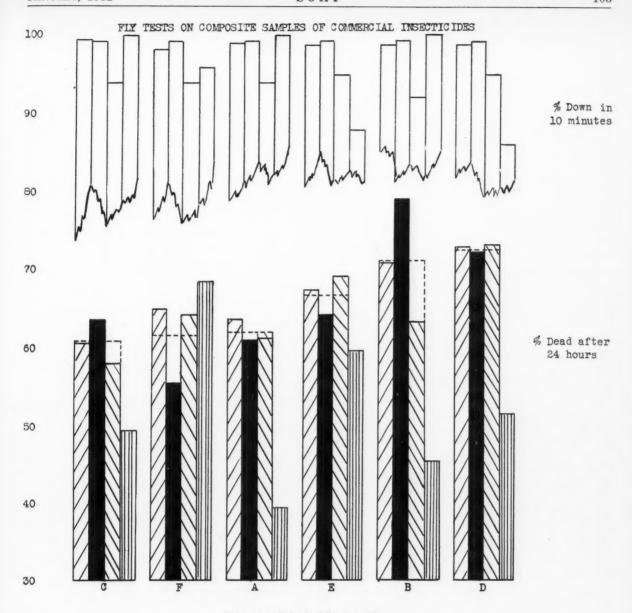
.

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"Its the Odor that Sells the Product"



EXPLANATION OF CHART

Cross-hatched vertical line on left — average kill according to laboratory No. 1. Black central section — average kill according to Laboratory No. 2. Cross-hatched vertical line on right — average kill according to Laboratory No. 3. Vertically ruled line on right — average kill according to Laboratory No. 4. Dotted extensions — average results obtained by Laboratories 1, 2 and 3. Upper graphs — average "knockdowns"

Although three of the laboratories are in practical agreement, one laboratory is not in accord. On the assumption that the three laboratories which agree are therefore most apt to be correct, we arrive at the following "kill averages" for the insecticides tested:

A	61.7	D72.7
B	71.0	E66.7
C	60.6	F61.4

From which we obtain the following ranking:

Again, referring to table I, the average kill for the whole group of insecticides as determined by the collaborating laboratories is as follows:

Laboratory	1										66.6%
Laboratory	2										65.9%
Laboratory	3										64.7%
Laboratory	4										52.5%

Assuming the six brands of insecticides tested to represent the present standard which dominates the market, we find this value to be 65.7% final kill on the basis of the average of the three

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Write for descriptive literature and prices.

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concordant laboratories, or 62.4% based on the average of all four laboratories.

Using the "fly-testing" procedure as the method for determining effectiveness, your insecticide is up to the present "standard" of strength if it kills two-thirds of the flies upon which it is applied under the conditions of this test.

For purposes of comparison, it is interesting to note that one of the laboratories which collaborated on these tests has reported the results of an extended series of tests upon different samples of pyrethrum. The pyrethrum samples tested were extracted in the proportion of 1 pound of pyrethrum per gallon of petroleum distillate. Though there was much variation in the effectiveness of the different extracts, the final average kill was found to be 64.8%.

Developments in Disinfection (From Page 100)

*R. Black, H. Shaw and T. K. Walker, J. Chem. Soc., 1931, 272. T. K. Walker, A. J. Suthers, L. L. Roe and

H. Shaw, J. Chem. Soc., 1931, 514.

*M. T. Bogert and H. G. Husted, Abstracts of papers of the Indianapolis meeting of the Amer. Chem. Soc.

¹⁰ F. Ditthorn, Zeitschr. f. Desinf., 23, 415 (1931). G. Farbenindustrie, A. G., Pharmaz. Zentralh., 72, 89 (1931).

11 A. Goerner and F. L. Haley, J. Lab. Clin. Med., 16, 957 (1931).

12 J. W. Churchman, Proc. Soc. Exptl. Biol., 28, 646 (1931).

¹³ Ostro Research Lab., U. S. Pat., 1, 785, 327.

14 H. Linden and F. K. T. Schwarz, Arch. f. Hygiene, 106, 133 (1931).

15 A. H. Eggerth, Journ. of Experimental Med., 53, 27 (1931).

14 J. E. Walker, Journ. Amer. Med. Assn., 1931, 19. ¹⁷ B. Hampil, Amer. Journ. of Hygiene, 13, 623 (1931).
¹⁸ E. K. Rideal, A. Sciver and N. E. G. Richardson, Per-

fumery and Ess. Oil Record, 21, 341 (1930).

19 A. Morel, A. Rochaix, J. Doeuvre and R. Guillot, Comptes rend. de la Soc. de biol., 104, 582 (1930).

20 R. E. Miller, Amer. Journ. of Pharmacy, 103, 324 (1931).

²¹ K. Tauchert, Zeitschr. f. Desinf., 23, 214 (1931). ²²G. Meissner, Zentralbl. f. Bakerteriol I. orig., 119, 375

23 E. Fourneau and K. I. Melville, Journ. of Pharmacol.

and exper. Ther., 41, 21 (1931).

E. Drake and F. Dunning, Journ. of Infect. Dis., 48, 366 (1931). J. J. Novak and E. Drake, Med. Journ. and Rec., 134, 243 (1931).

²⁵ J. H. Waldo, H. A. Shonle and H. M. Powell, Journ. of Bacteriol., 21, 323 (1931).

* H. M. Powell and W. A. Jamieson, Amer. Journ. of Hygiene, 13, 296 (1931).

B. P. Ebert and L. H. Peretz, Zentralbl. f. Bakteriol.

 I. Orig., 121, 258 (1931).
 O. B. Williams and N. Gaines, Science News Letter, 19, 179 (1931).

There are reported to be a number of botanicals growing in Venezuela used locally in combating insects, among which are "barbasco," rosemary, Ocimum basilicum, and "Torongil." A list of possible suppliers of botanical insecticides in Venezuela is available to accredited American firms upon application to the Bureau of Foreign and Domestic Commerce, Washington.

New Entomological Laboratory

The Entomological Testing Laboratories, Inc., New York, has been established as an independent commercial entomological and chemical laboratory for the testing of insecticides. According to an announcement from John Powell & Co., New York, the new laboratory has been established as a subsidiary of this company but will operate altogether independently of the Powell organization. The services of the laboratory are designed primarily for the large buyers of insecticides, both bulk products for industrial use and packaged goods, who have no means of checking the value of the various insecticide products offered to them. Complete entomological testing by the Peet-Grady Method and other methods, and facilities for chemical examination will be available.

New Interstate Chemical Year Old

Completing its first year as a separate company, the Interstate Chemical Manufacturing Co., Jersey City, N. J., is now located in its new plant in that city. The new Interstate firm was organized in January, 1931, after buying the in-



secticide department of the old Interstate Chemical Co., which was established in 1909. The plant was used during the war for the manufacture of munitions for the Allies. The new company manufactures mostly agricultural insecticides and fungicides, including Bug Death, ant killer, and scale destroyer.

Pfeiffer Insecticide Co., Louisville, has applied for a reduction in its capitalization from \$100,000 to \$1,000.

It is reported that experimental cultivation of pyrethrum flowers is under way in Kenya, Africa. The grower shipped small quantities to London recently whereupon it was determined that the quality was of high grade.

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Toxicity of Pyrethrum Extracts By the "Roach Test" Method*

A BIOLOGIC method for the determination of the toxicity of an oil-pyrethrum extract using the Croton Bug, Blatella germanica. The Insecticide Standardization Committee submits the following detailed report covering the "roach test" as a separate and supplementary part of its annual report.

The possibility of obtaining greater simplicity than is possessed by the "fly test" has often led to the consideration or use of roaches as test insects. One of the laboratories which collaborated in using the fly testing method for the evaluation of the composite insecticide samples described in the June, 1931, report, also undertook to make "roach tests" for the three-fold purpose of obtaining a comparison between the two methods of testing, of determining the effectiveness of these composite samples against roaches, and, finally, of establishing whether or not the "roach test" offers a sufficiently dependable index of insecticidal activity.

This Cockroach method is based on the "paralyzing time," i.e., the time that elapses between the moment of spraying the cockroach with the insecticide and the moment the roach lies on its back because of paralysis. As the spray increases in its toxic principles, the difference in the time intervals between the "paralyzing times" becomes less and less, while, on the other hand, if the fly spray contains less of the toxic principle, the difference between the time intervals of the "paralyzing time" becomes greater. There must exist an optimum concentration range within which the difference in "paralyzing time" per unit of concentration difference is large enough and the time required is short enough to make this method accurate and economically practical. The greatest variable factor involved in this method of determining the toxicity of any fly spray is the individual strength of the cockroaches.

The optimum concentration range used in this method consists of a set of standard solutions of increasing and evenly graduated strengths. The concentrations are expressed in pounds of pyrethrum flowers per gallon of solution, e.g., $\frac{1}{4}$,

 $\frac{1}{2}$, $\frac{3}{4}$, 1, $\frac{1}{4}$ and $\frac{1}{2}$ pounds of pyrethrum flowers per gallon of solution. The above concentrations fall within the range of practical time limits.

Procedure

A N adult Croton bug (Blatella germanica) is placed in a hemispherical wire cage which is placed on a clean piece of blotting paper. The cage is placed between a small electric light and the atomizer. The roach will take a position away from the light turning its abdomen toward the atomizer. The roach is always sprayed on the abdomen with a constant amount (0.4 c.c.) of spray from a constant distance (10 inches). The amount of spray applied is kept constant by using a special cut-off atomizer of Devillbis make. connected to a compressed air line carrying 12 lbs. pressure. The instant the spray has been applied a stop-watch is started and the time interval is taken when the roach lies on its back and is unable to remain on its feet. A perfectly clean cage and a clean piece of blotting paper are used for each roach. Ten such tests are made and from this the mean time interval or "paralyzing time" is determined.

Table I.

Relative Efficiency of the Various I.D.M.A. Blind Samples of Household Insecticides—Tested on the German Cockroach, *Blatella germanica*, Recording the Average "Paralyzing Time."

Sample I	V	0.						P	a	ra	aly	yzing '	Fime—Nov., 1931
A												127	secs.
В												76	44
C												107	"
D												82	44
\mathbf{E}												104	46
F												130	46

Table II

Relative Efficiency of Standard Sprays Containing Known Varying Amounts of Pyrethrum—Tested on the German Cochroach, Blatella

^{*}A supplementary report from the Insecticide Standardization Committee, before Insecticide & Disinfectant Mfrs. Assn., New York, Dec., 1931.

RY



The SPEED of action of an insecticide is a customer's measure of effectiveness.

LETHANE 384 insecticides possess remarkable speed of action in addition to giving high final kill.

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222 W. Washington Square

Philadelphia, Pa.



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It makes no difference how effective the insecticide or repellant may be, it MUST be correctly applied if the results are to be the BEST. The better the sprayer, the better the customer will like the product. That is the rule.

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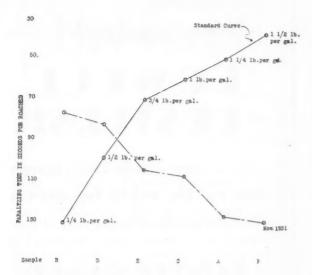
Over fifty years in the business has eliminated all risk and experiment in ACME products. The very height of perfection has been attained. Every sprayer carries a money-back guarantee of satisfaction. If it isn't in our regular line, we can build a sprayer to fit YOUR needs.

Our No. 200 sprayer is a leader. Special drip cup feature; air and spray tubes coordinated to produce a mist or fog that hangs in the air longer; special processed leather plung-Tell us your er, etc., etc. Tell us your needs. Write for samples and



Potato Implement Company, Dept. 34 TRAVERSE CITY, MICHIGAN

BOACH TESTS OF COMPOSITE INSECTICIDE SAMPLES



germanica. Recording the Average "Paralyzing Time."

Concentration lbs. per gallon									Paralyzing Time May, 1931 Nov., 1931				
11/9	-											40 secs.	
11/4												_	50
1	66											56	60
3/4												63	70
1/2	6.6											77	98
1/4	66											91	130

The concentrations represented in the above series of Standard Sprays are within the optimum concentration range.

Conclusion

FROM these tests, it appears that the different insecticides fall in the same order of increasing or decreasing effectiveness by either the "fly" or the "roach" test, but comparison of the results obtained on the composite samples with those which determined the "standard" values are not in agreement with the same comparisons made by "fly" tests.

The laboratory in which the work reported above was done is also using the Peet-Grady (fly) method of testing insecticides but submitted this work on roaches in order that a comparison of the two methods might be available.

Exports of household insecticides and exterminators from United States during September, 1931, amounted to 514,067 pounds, worth \$143,-707, as compared with 983,275 pounds, valued at \$310,709, during September, 1930.

Registration at 18th Convention

THOSE who attended the 18th Annual Convention of the Insecticide & Disinfectant Manufacturers Association at The New Yorker, New York, Dec. 7 and 8, and who signed the official register, were as follows:

Evans E. A. Stone J. W. Schiffer, W. E. Kaynes Henry A. Nelson Dr. C. H. Peet Dr. B. G. Philbrick N. J. Gothard W. J. Andree C. T. Drummond Dr. Robert C. White Dr. Emil Klarmann Dr. W. S. Abbott Dr. C. C. McDonnell Peter Dougan Chas. Mason J. Buttner, Jr. F. U. Rapp Dr. L. M. Roeg Dr. A. M. Patterson Fred A. Hoyt W. A. Hadfield Dr. G. F. Reddish Dr. W. Drevfus C. H. Sterrett W. J. Wagner James Beatty J. S. Riel H. A. Allers B. Alexander H. W. Hamilton W. Castonguay J. H. Carpenter S. H. Bell C. P. McCormick J. Rodden H. R. Lippincott P. J. Walsh G. R. Rinke John Powell Robert C. Kelly Dr. Alfred Weed Smith L. Rairdon J. H. McGuire Wayne Dorland V. W. Mider E. A. Murray W. J. Roehl S. S. Selig Frank E. Byrne F. S. Roberts James Varley Wallace Thomas J. N. Davies H. Noble S. P. Nickells T. Lewis Ira P. MacNair Grant A. Dorland C. L. Weirich K. A. Dolge Dr. B. T. Woodward D. W. Tanenbaum J. Gibson Dan Rennick R. Bradley

C. D. Grupelli

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(Turn to Page 121)

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Hydrocyanic Acid As a Fumigant

By S. S. ROSEN

President, Guarantee Exterminating Co.

chemicals are being suggested as fumigants, hydrocyanic acid, in use for forty years, remains the standard fumigant. Inasmuch as more hydrocyanic acid is used for fumigating purposes today than all other fumigating chemicals combined, our discussion here is confined exclusively to this product. It is worthy of note that in those branches of Government service relating to quarantine, where the aim is a perfect kill which is absolutely necessary to prevent plague and other contagious diseases being brought into the country, hydrocyanic acid is the chief fumigant in use.

Many of the chemicals being marketed as fumigants are being offered on the basis that they are "non-poisonous" or not as toxic as hydrocyanic acid. "Non-poisonous" is, of course, a relative term. Any fumigant, sufficient in strength to effect a thorough kill of insects and rodents must, of necessity, be poisonous. Hydrocyanic acid is simply a more concentrated fumigant, that is, much less of it is required to accomplish results than is the case with other milder gases and less effective chemicals. From the point of view of safety, is it not better practice to use a material of known toxicity with proper safeguards than a fumigant of doubtful toxicity without the proper safeguards?

In view of the fact that there are several forms of hydrocyanic acid available, it is important to know something about the equivalent strengths of the materials so that intelligent comparison can be made. Liquid hydrocyanic acid of commercial grade, a 96/98 per cent product, has been used as the standard of comparison by the U. S. Government in comparing cyanogen fumigants for toxicity, efficiency, etc.

The following table shows the amounts of other fumigants required to equal one pound of liquid hydrocyanic acid:

Zyklon Discoids (hydrocyanic acid)... 1 pound Calcium Cyanide (50-55% CN)...... 2 pounds Calcium Cyanide (25% CN)....... 4 "Sodium Cyanide (pot method)...... $2\frac{1}{2}$ "

It is obvious that since it is the cyanogen content of the fumigant that counts, it is important that buyers of fumigation insist on the amount of HCN to be used on a job. An interesting illustration of this follows: Several weeks ago, a nationally known tobacco concern called for bids on the fumigation of a warehouse. Competition was keen. One bidder submitted his estimate based on a pound of HCN per 1,000 cubic feet of the space to be fumigated. A competitor, submitting a price 15 per cent lower, also stated he planned on using one pound of cyanide per 1,000 feet. He was, of course, awarded the contract but was required to change the wording to "one pound of HCN per 1,000 feet" which was done. He then proceeded with the work on the basis of six ounces of HCN as the equivalent of a pound of sodium cyanide. Unfortunately for him, the purchasing agent of the tobacco company checked on the materials used, with the result that the work was ordered done over exactly in accordance with the terms of the contract. This fumigator suffered a heavy financial loss and an impaired prestige.

Another interesting illustration is the case where one of the largest coastwise steamship operators in the country had their vessels fumigated regularly by the old pot method (sodium cyanide). A certain representative company, using the HCN method exclusively, endeavored to procure this account which elicited the following from the vice-president of the steamship company: "I discussed the facilities of your company with our Port Captain. The only thing which seemed to stand in his way of giving you some of our work is price. Why don't you get in touch with him and tell him just what you can do, bearing in mind that one of the worst pests we have on our steamers is cockroaches, which must be exterminated when the ships are fumigated and not simply turned over on their backs and allowed to revive and multiply."

After the above table was explained to the vicepresident and several demonstrations given, it was proven that the HCN prices were compara-

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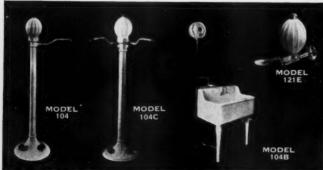
SOAPERIOR DISPENSERS sell because they are foolproof. They are strong and retain their attractiveness and usefulness thru years of use. All working parts are precision tooled to guard against leakage and our engineers have ingeniously simplified their mechanism to insure perfect operation.

There is a SOAPERIOR DISPENSER to meet every need . . . Gravity Feed Type (consisting of fool-proof Hexagon Valves—cross-section shown) and handsome tanks (two types pictured) installed at an elevation and serving any number of basins.

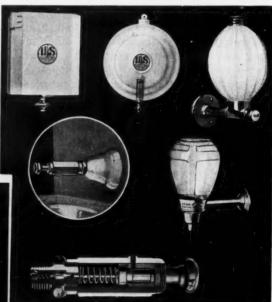
Also Hospital Equipment (4 models shown) and Individual Dispensers of every type (2 illustrated) . . . some built for heavy duty . . . others priced so low you can give them away to your trade with soap orders. Also Powdered Soap Dispensers.

Send for catalog and price list.

HOSPITAL SOAP EQUIPMENT







U. S. SANITARY SPECIALTIES CORPORATION

435 SO. WESTERN AVE. CHICAGO, ILL.

tively lower and more effective results were obtained.

THE first step in any fumigation is to take careful measurements and calculate the cubic contents. In taking this measurement, no deductions should be made for space occupied by machinery, commodities or furnishings. The full dimensions should be taken as if the room or floor were empty. The dimensions and cubic capacity of each room on each floor should be figured separately and these figures tabulated, together with the dosage required for each room, number of windows, entrances and other places to be sealed, etc.

As will be readily realized, dosage and time of exposure depend primarily on two conditions, namely, (a) the degree of penetration necessary to reach the insects in their hiding places and (b) the relative gas-tightness of the enclosure to be fumigated. These conditions vary considerably. In one case, it might be possible to get a thorough kill with a relatively low dosage, while in another case a much higher dosage would be necessary. Since there is no really practical way of determining these conditions, experience has shown that it pays to use an adequate dosage and reasonably long exposure on every job. In other words, it is much cheaper and considerably more satisfactory to use more gas than might seem necessary, rather than have to repeat the job and suffer loss of time, money and prestige.

Another consideration is the fact that there are a few insects which, in certain stages of their life cycle, are unusually resistant to any fumigant. These are not readily controlled by routine methods of fumigation and care must be exercised in determining these facts. For example, there are certain seasons of the year when the tobacco beetle is particularly resistant, and heavier doses and longer exposures become necessary to obtain the desired results.

NDUSTRIAL BUILDINGS: Fumigation of entire industrial buildings is being practiced today to a very considerable extent and the indications are that the practice is rapidly increasing as more plant owners and operators become aware of the great economic advantages to derived from a clean plant and especially in the insect-free shipment of their products. In the average reasonably gas-tight building, a dosage of eight ounces of HCN per 1,000 cubic feet of plant space, with an exposure of 24 hours, should effect a satisfactory kill of the general run of insects infesting plants manufacturing and handling foodstuffs and other commodities, such as flour mills, candy factories, other food product plants, storage warehouses, etc.

Where the building cannot be made gas tight by thorough sealing, a higher dosage should be used to compensate for leakage. To this rule, there are certain exceptions. For example, in a flour mill, it is not expected that any fumigant used at the general building dosage mentioned above, will penetrate clear through sacks of flour to kill any insects which might be in the center of the mass, although HCN possesses good penetrating powers.

Discolorations: In a few instances, discoloration of paint has resulted from the use of HCN. The conditions under which this has occurred are unusual and is due to excessive humidity. No effect of HCN is to be noticed at a normal atmospheric humidity up to 70 per cent. This is independent of temperature, and discoloration need not necessarily occur at a humidity of above 70 or 80. At a relative humidity of above 80, slight injury occurs especially if the temperature is low or has a tendency to fall during fumigation or ventilation period. These conditions of temperature lead to the formation of films of moisture in which are absorbed large quantities of HCN on the surface of the material. Moisture condenses where the surface is cooler than the air and the air is nearly saturated with water. That is why damage often occurs at the time of airing. Care should be exercised in performing a fumigation on an exceedingly humid day.

Another common cause of discoloration, particularly in the fumigation of residences is where a soapy or greasy deposit is present on such articles as bath tubs and bath fixtures, gas ranges and kitchen walls. The discoloration may be due to the combination of the hydrocyanic acid with the soap or grease on the surface and may be readily removed by the application of a dilute hydrogen peroxide.

Fumigation of Finished Foodstuffs: Hydrocyanic acid will not combine chemically with foodstuffs ordinarily subject to insect infestation. In fumigation of domestic dwellings, however, living plants, liquid fruit and foods (such as jams and preserves) unless in sealed containers, should be removed, if practicable. Milk and butter, if unprotected, have a natural affinity for foreign odors and should be removed.

Industrial buildings, however, containing large amounts and great varieties of foodstuffs, are regularly fumigated with no harmful effects to the foods or to the people consuming such foods, because the gas is rapidly given off upon ventilation and all traces have vanished long before the products reach the consumer.

Having mentioned other chemicals used as fumigants, some of which are admittedly superior to cyanide for special types of work, it is interesting to note the relative toxicity of these chemi-

Finer Atomization



With

THE

TORNADO Compressor Type Electric Sprayer

A leader for years in the manufacture and sale of Portable Electric Sprayers, Breuer has maintained an enviable position by keeping step with the needs of the insecticide trade.

Now, the new TORNADO Model 52, illustrated, is ready for your inspection and use—greater power, finer atomization with new, positive pressure compressor construction, a beautiful custom-built job guaranteed to please your customers—complete, new design and operation—compact, self-contained, one hand unit—positively the most economical and efficient modern method for applying insecticides, disinfectants and germicides. Just the speedy, efficient, all-purpose unit you have always wanted to stimulate business.

The first manufacturer to see and use this new spray performance ordered 180 units immediately! Let us send you sample on free trial so that you too may use and inspect this unit. No obligation. Write us today for complete information.

New Features You'll Like!

1—Not a blower type incorporates a real air compressor fan unit.

2—Positive pressure compressor operation atomizes insecticides into finest smoke mist obtainable.

3—A real, self-contained, one-hand unit.

4—Compact, all aluminum construction with quart container.

5—No shoulder straps or hose to trouble.
6—Powerful 1/2 H.P.

6—Powerful 1/6 H.P. G.E. Universal Motor. 7—Weight only 4 pounds.

8—Just plug in — instant operation,
 9—Fastest, finest insecticide atomisation obtainable.

We also make Model 6 Tank Type and Model 50 Blower Type Sprayers —leaders for years.



BREUER ELECTRIC MFG. CO. 862 Blackhawk St. Chicago, III.

A FORMULA

A definite formula is followed in the designing of Hudson Sprayers. This formula involves the length and diameter of the pump. Another "ingredient" is the diameter and lift of the syphon tube. Still another is the gauge of the hole in the pump end. And there are many other factors.

But these are details. The important thing is that the Hudson formula was worked out largely from ideas and suggestions submitted by leading insecticide manufacturers, working in close harmony with Hudson engineers.

Such a formula, kept up to date and revised when revision means improvement, must be close to right. A sprayer, designed on that basis, for your particular insecticide, must be close to solving your problem.

H.D.HUDSON MANUFACTURING CO.

589 E. ILLINOIS ST. CHICAGO, ILL.

New York City Minneapolis, Minn. Omaha San Francisco Philadelphia Kansas City, Mo. cals. The following table compiled by various authorities, well illustrates this point:

Chemical	Unit of Toxicity
Hydrocyanic Acid	1.00
Chloropicrin	
Ammonia	13.06
Ethylene Oxide	16.00
Ethylene Dichloride	54.36
Carbon Disulphide	100.24

The above table means that hydrocyanic acid is more than seven times as toxic as chloropicrin and more than a hundred times as toxic as carbon disulphide, etc.

Plan Law to Color All Poisons

Bills requiring the coloring of poisonous substances which resemble commonly used foodstuffs such as flour, baking powder, etc., have been introduced into both the United States Senate and the House of Representatives. House Bill 371 has been introduced by Representative Reynolds, House Bill 5120 by Representative Cannon, and Senate Bill 1229 by Senator Hull. All have been referred to the Committee on Interstate and Foreign Commerce.

It is understood that the bills have been introduced at the behest of leading flour manufacturing interests to prevent substitution of white powdered poisons for flour by accident in bakeries, kitchens, etc., covering poisons as sodium and other fluorides, arsenicals, mercury salts, and other insecticide, rodenticide, fungicide, etc., substances. It is understood that definite tinting of the various types of poisons will be required, if the bills become law, after the fashion of the new Board of Health regulations in New York. (Soap, pg. 121, Dec., 1931.)

The Insect Menace, by L. O. Howard. 53/4 x 8½. 350 pages. The Century Co. \$3.50. A popular treatise in which the author, former Chief Entomologist of the U.S. Department of Agriculture, discusses the ever more serious problem of insect control. He points out the natural advantages possessed by insects in their struggle with man for supremacy, and emphasizes the importance of an intelligent and continuously maintained program of insect control. It is a book which portrays vividly for the average man the real danger present in allowing the spread of insect pests to proceed unchallenged. Its general distribution cannot help but awaken that "insectconsciousness" in the general public which will eventually lead to a widespread movement toward insect control.

Commission Approves New Premium Rules

The Federal Trade Commission under date of Dec. 11 officially announced the rules covering premiums and gratuities which have been approved for the insecticide and disinfectant industries, according to an announcement by Otis B. Johnson, secretary of the Commission. He states in part:

"The Federal Trade Commission has reconsidered its prior action on the rule of the Insecticide and Disinfectant Industry, adopted by the Industry at a trade practice conference held in Indianapolis, Indiana, on the 10th day of November, 1926, and there is enclosed for your information a copy of the rules which the Commission by final action approved or accepted for this industry. These rules have been approved and accepted for the industry by the committee or individual authorized by the trade practice conference to act for the industry."

The rules according to the official announcement, follow:

GROUP I.

Rule 1. The Commission substituted and approved the following for a part of the rule as published January 5, 1927: Directly or indirectly to give or permit to be given or offer to give money or anything of value to agents, employees, or representatives of customers or prospective customers, or to agents, employees or representatives of competitors' customers or prospective customers, without the knowledge of their employers or principals, as an inducement to influence their employers or principals to purchase or contract to purchase industry products from the maker of such gift or offer, or to influence such employers or principals to refrain from dealing or contracting to deal with competitors, is an unfair trade practice.

GROUP II.

Rule A. The Commission substituted and accepted the following for a part of the rule as published January 5, 1927: It is the opinion of the industry that insecticide and disinfectant manufacturers should use their best efforts to observe this rule of approved practice.

At the end of the official statement from the Commission the following notation was made: "P. S. Attention is called to Federal Trade Commission vs. Raladam Company, decided May 25, 1931, in which the Supreme Court of the United. States has apparently held that in order for a practice to constitute an unfair method of competition it must be shown to have the tendency to injuriously affect the business of competitors."

METHYL SALICYLATE MERCK

(Oil Wintergreen Synthetic)

The one widely accepted odor for fly spraystested, tried and approved by leading manufacturers. Fresh and aromatic-pleasant to human beings, yet it does not attract insects like some of the sweeter floral essences.

Methyl Salicylate Merck is very economical. an effective mask for unpleasant odors. It imparts the fresh aromatic odor of wintergreen to products such as glues, pastes, furniture polishes.

Methyl Salicylate Merck is manufactured on a large scale and conforms to all the requirements of the U.S.P. Write or 'phone our nearest office for quotations or trial order.

OTHER MERCK

Lanum

PRODUCTS

Magnesium Carbonate

Mercurials

Acid Carbolic

Paradichlorbenzene

Alkaloids Ammonium Carbonate

Potassium Hydroxide **Quinine Salts**

Bismuth Salts

Sodium Fluoride Sodium Hydroxide

Calcium Carbonate Carbon Disulphide

Sodium Perborate

Carbon Tetrachloride

Sol. Antimony Chloride Sol. Chlorinated Soda

Chloroform Chlorophyll

Strychnine

Chlorthymol

Tri-sodium Phosphate Vanillin

Corrosive Sublimate Cresol U.S.P.

Zinc Perborate

Ether

Zinc Stearate

Write for prices

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MANUFACTURING CHEMISTS RAHWAY, N. J.

Industrial Division: 916 Parrish St., Philadelphia

New York St. Louis Montreal (Merck & Co. Ltd.)

THERE IS A SPRAYIT FOR EVERY PURPOSE



Tin sprayers that sell for a few cents each, compressed air sprayers, bucket sprayers, trombone sprayers, electric sprayers from the smallest cup gun units up to outfits of 10 cu. ft. of air per minute. Only Sprayit offers a sprayer for every purpose.

Each sprayer from the smallest to the largest, in design, construction and operation reflects the experience gained in building the thousands upon thousands of high quality paint sprayers that are in use throughout the world. Building equipment for the correct and economical atomization of materials is our business and we know that business thoroughly.

Our production facilities and the completeness of our line enables us to offer the highest quality sprayer at prices that will prove attractive to you.

We will be glad to submit samples to responsible organizations and to consult with them on their spraying problems.

Send for Catalog No. 32



SOUTH BEND, IND.

Dr. Robert C. White, president of the Robert C. White Co., Philadelphia, and president of the Insecticide & Disinfectant Manufacturers Association for 1930 and 1931, besides being an old-



time oarsman, Commodore of the Schuylkill Navy, well-known regatta referee, rowing expert, and yachting enthusiast, is also a shot over the decoys of no mean ability. Here is Dr. White with a bag of ducks which he knocked down while on a shooting trip during the past duck season.

-0-With its abundance and diversity of insect life throughout the year, Jamaica offers a small but steady demand for insecticides. The use of fly sprays in homes is somewhat restricted owing to the absence of screened houses and to the use of latticed transoms, continually open. The fly season in Jamaica is from May to September. There is no domestic manufacture of insecticides. Competition exists primarily between Great Britain and the United States. Total imports in 1929 and 1930 approximated \$30,000 annually. While the United States and the United Kingdom shared the business about equally during 1929, Great Britain in 1930 furnished about one-half of the goods in question as against one-third supplied by the United States.

A Panama decree which will go into effect April 1, 1932, imposed surcharges of 10 centavos per gross kilo on imports of olive oil and coconut oil, and 20 centavos per kilo on lard, cottonseed oil, peanut oil and other edible cooking fats. These are in addition to the usual ad valorem duties.

U. S. Bureau Reports on Insecticides

The work of the U.S. Bureau of Chemistry and Soils with insecticides, fumigants and related products is covered in the 1931 annual report of the chief of that branch of the U.S. Department of Agriculture. Discussed in some detail in the report are insecticidal plants, synthetic organic insecticides, spray residues, fumigants, homologues of Paris green, and explosion and fire hazard of fumigants and insecticides.

In the study of insecticidal plants with the object of developing new insecticides which can be substituted for lead arsenate, rotenone from derris root, says the report, "has continued to claim the greatest share of attention, as it is still the most important and promising material in this connection." Rotenone has been studied from all angles, the report goes on, adding that "as a short summary of the findings, it may be said that rotenone has now proved itself superior to nicotine against many aphids, at least comparable with lead arsenate against some chewing insects, and practically nontoxic to man and animals when taken orally."

"The other crystalline materials," the report states, "toxicarol, deguelin, and tephrosin, that have been isolated from certain tropical plants. have also been intensively studied and their toxicities to numerous insects have been determined. Certain relationships which have been established between these materials are expected to prove a great aid in the final interpretation of the structure of this whole group of fish-poisoning materials."

Insecticidal tests with 25 dipyridyl derivatives and related compounds, carried on in conjunction with the Bureau of Entomology, brought out important information on the correlation between chemical structure and toxicity, according to the report. New methods for the synthesis of nicotine isomers starting with gamma gamma dipyridyl have been worked out.

The study of the compounds that copper arsenite forms with the copper salts of the fatty acids has been continued in an effort to develop a material that is equal to Paris Green in its toxicity and superior to it in other respects, the Bureau reports. Stearic "green" was proved to be a definite substance, and the preparation of about 25 pounds of it was begun in order that both laboratory and field tests might be made during the coming season, it was reported.

Meanwhile agencies of the bureau carried on considerable experimental work to determine the explosion and fire hazards of insecticides and fumigants. Large scale tests conducted at the Norfolk, Va., grain elevator, during the fumigation of wheat with ethylene oxide and solid carbon dioxide, and previous tests at the Canadian

ANNOUNCING:

THE UNIVERSAL SOLUTIONIZER

The Universal Solutionizer is a new device for mixing, regulating and controlling soap and water solutions and uses ANY type of potash soap not a "liquid." May be installed like a bung plug in either steel or wood containers in which you ship your soap. May be adjusted to produce quantity solutions of any desired richness.

Be one of the first to offer your customers this new equipment for mixing, controlling and removing soap solutions from your containers. For details write

The SOLUTIONIZER Company 1449 W. 69th ST., CHICAGO

Manufacturers of equipment for producing mechanically controlled soap and water solutions using any type of soap not a liquid and most powders.

Distributed west of the Rockies by Turco Products, Inc., 1512 Industrial St., Los Angeles.

for 33

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Makers of
Coal Tar
Disinfectants
Stock Dips
Pine Oil
Disinfectants
Insecticides
Polishes
Cleansers
Liquid Soaps
Spray Products
Roofing Cements

for the Wholesale and Jobbing Trades Only

DISINFECTANTS

Pine Oil Disinfectant, H. L.

Pure Hygienic Laboratory Pine Oil Disinfectant containing 70% steam distilled pine oil. Finest quality pine disinfectant.

Pine Disinfectant Comp.

Lower cost disinfectant compound containing 40% pure steam distilled pine oil as chief active ingredient.

Pine Odor Deodorant

Non-medicinal pine odor deodorant of low cost for use in chemical closets, livery stables, kennels, etc.

Coal Tar Dip, No. 1

Coal-tar disinfectant containing 20 to 25% phenols and having a phenol coefficient by H. L. Method of 4 to 6.

Coal Tar Dip, No. 2

Lower cost coal-tar disinfectant with a phenol coefficient by the H. L. Method of 2 to 3.

Insecticide Dips

Low cost disinfectants of creosote oil base. In two grades, having phenol coefficients of approximately 2 and of 1 by H. L.

Send for samples, prices, and details.

CHEMICAL SUPPLY COM

2450 Canal Road

Cleveland, 0.

Established 1898

Pacific Railway elevator at Port McNicoll, Ontario, indicated, according to the report, that there is no apparent explosion or fire hazard in the storage bins after the grain has been treated with a fumigant consisting of ten parts of solid carbon dioxide to one part of ethylene oxide. (Copies of the complete report of the Bureau may be secured from the Government Printing Office at 10c, each.)

Stone Speaks at Drug Dinner

Evans E. A. Stone, newly elected president of the Insecticide and Disinfectant Manufacturers Association, was the principal speaker at the Christmas dinner of the Drug and Chemical Section of the New York Board of Trade held at the Hotel Pennsylvania late in December. He reviewed the new regulations adopted by the New York City Department of Health concerning the sale and use of exterminating preparations, and asked the drug section if it would do something regarding the new regulation on sodium fluoride which now must be colored nile blue. Percy Magnus, chairman of the section, recommended that the matter be referred to the executive committee for further consideration.

Among those seated at the speakers' table were: S. B. Penick, S. B. Penick & Co.; F. J. McDonough, New York Quinine & Chemical Co.; and Percy B. Magnus, Magnus, Mabee & Reynard, Inc. Five new directors were introduced. They were: H. Weicker, Dodge & Olcott; Elmer Hessler, G. S. Stoddard & Co.; C. Leith Speiden, Innis, Speiden & Co.; George Simon, Heyden Chemical Corporation, and S. W. Fraser, Burroughs, Wellcome & Co.

Sear-Mac Exterminators, 591 Main St., Stamford, Conn., expect to place a line of fly sprays, bed bug liquids, moth sprays and roach powders on the market in the Spring. For the present, the new company is confining its activities to doing a general exterminating business. The new company was organized by Earl M. Searles.

In a recent patent covering the use of calcium cyanide for fumigation, an apparatus is described in which a body of calcium cyanide is powdered by rubbing against an abrading surface and the powder then blown out of the container in which the grinding is effected. U. S. Pat. No. 1,820,394.

Russell Howe, formerly a partner in King & Howe, New York, and later with United Chemical & Drug Corp., Bridgeport, Conn., has joined R. Hillier Son Corp. as Eastern representative. He will cover New York State, New England and Baltimore.

Huntington Opens New Branches

Huntington Laboratories, Inc., Huntington, Ind., has recently opened two new branch plants, one at Toronto, Canada, and the other at Denver, Colorado. The Canadian plant is owned by a subsidiary, Huntington Laboratories of Canada, Ltd., which was incorporated in Canada with an initial capital of \$40,000. The headquarters and plant are located at 72 to 76 Duchess Street, Toronto. C. B. Child, who has been Canadian representative of Huntington for a number of years past, is president of the new Canadian company. The plant was built and the equipment installed under the direction of Thomas P. Annan, secretarytreasurer and chief chemist of the parent company. A complete Huntington line is now being manufactured at the new Toronto factory.

The new Denver plant, which has been put into operation within the past week, is located at 1429 Eighteenth Street and is in charge of C. K. Hause, who has been connected with the Huntington organization for a number of years. Such items where the freight from the Indiana plant to the Coast and Mountain States is an important factor, will be manufactured in the Denver factory. J. L. Brenn is president of Huntington Laboratories, and Benjamin Alexander is vice-president.

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There is a fair and growing demand for insecticides in India, largely confined, however, to the needs of the Europeans and the wealthy Indians. Disinfectants are manufactured to some extent in India and there is a fairly important import business supplied by British manufacturers. The British brand "Littles Phenoids" is reported to be popular among the departments of the government, which use considerable quantities of disinfectant, and is said to obtain more than 30 per cent of the trade at Bombay.

Household insecticide exports from United States during October, 1931, amounted to 242,401 pounds, valued at \$65,739, as compared with 873,694 pounds, worth \$273,993, in October, 1930. Exports of household disinfectants, deodorants, germicides, etc., during October, 1931, amounted to 148,812 pounds, valued at \$21,327, as against 172,965 pounds, worth \$21,777, during October of the previous year.

Standard Aromatics, Inc., Brooklyn, has issued a folder describing its line of perfuming compounds for soaps, para blocks, theatre sprays and fly sprays.

Val A. Schmitz, advertising director of Stanco, Inc., has resigned his position to become associated with Screenland Magazine as a vice-president.

Soviet Chemical Exports Analyzed

In an article appearing in a recent number of the Economic Review of the Soviet Union data appears on Soviet exports of chemical products. Quoting from the report: "The export of crude glycerine and the chemically pure product from the U.S.S.R. was begun in 1926. During the past few years exports have risen rapidly and the total for 1930 of 3,251 tons was about five times as great as in 1913. Exports for the first half of 1931 equalled 813 tons, a considerable decline as compared with the 2,127 tons of the same period in 1930. The glycerine produced in the Soviet Union is a by-product of the candle industry, and has a content of pure glycerine in excess of that specified by the International Standard or British Standard Specifications. The output of soda products in the Soviet Union at present is estimated to be five times that of pre-war. The largest soda works in the U.S.S.R. are at Berezniky in the Urals and in the Donetz Basin. Exports of soda and soda products, causing soda and bicarbonate of soda, last year were more than four times those of 1929, totaling 31,478 and 7,498 tons, respectively. Germany was the most important purchaser.

O. L. Williams, vice-president and secretary of the Williams Sealing Corp. for several years past, has been elected president of the company, replacing the late George Williams. Other new officers include O. L. Simpson, vice-president and treasurer, J. T. Whitley, secretary, and J. A. Hey, assistant treasurer. Both Mr. Simpson and Mr. Hey have been connected with the company for many years, the former in the capacity of treasurer. Mr. Whitley is the company's Decatur attorney.

Magnus, Mabee & Reynard, Inc., New York, essential oils, aromatic chemicals, etc., have recently been elected to associate membership in the Insecticide and Disinfectant Manufacturers Association.

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Percy Anderson, crude drugs and gums, New York, has acquired the essential oil brokerage business of the late J. H. Rodriguez which will be continued as in the past. The firm of A. A. Stillwell & Co. has been liquidated, and George Briasco will become associated with Mr. Anderson.

Patterson Engineering Corp., East Liverpool, Ohio, has been formed in association with Patterson Foundry & Machine Co., the company being organized to develop the sale of specialized rubber machinery.

A greater volume of medicated soaps were shipped from the United States during the first ten months of 1931 than were shipped in the corresponding period o f1930, according to Department of Commerce figures, but price declines brought their value down. The African market showed the largest improvement in purchases of soaps and toiletries, the Union of South Africa alone showing an increase of 32 per cent.

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As the first step in a move by the Federal Trade Commission to enforce full publicity for methods used in obtaining advertising testimonials from prominent persons, an order has been issued against Northam Warren Corp., New York, instructing them to cease using paid testimonials in advertising unless the amount of payment accompanies the advertisement. The case in question involved endorsement of "Cutex" manicuring preparations by Ethel Barrymore, Anna Pavlowa, Atlanta Arlen and Mrs. Howard Chandler Christy. The order will be appealed.

Imports of linseed oil into Germany declined from 19,149 metric tons in 1929 to 15,391 metric tons in 1930. A further drop in the import trade was evidenced in the first eight months of 1931, when the total importation of oil was 5,513 metric tons, according to information received by the Department of Commerce from the consulat Frankfort-on-Main.

Stocks of crude cottonseed oil on hand in United States, Nov. 30, 1931, amounted to 144,484,910 pounds, as against 114,844,721 pounds on the same date in 1930. Stocks of refined oil totaled 346,559,207 pounds on November 30, 1931, as compared with 350,925,309 pounds on the same date in 1930.

Mrs. Carl Schaetzer, wife of Carl Schaetzer, Van Ameringen-Haebler, Inc., died December 26th at her home in the Fifth Avenue Hotel, New York. Services held December 28th were attended by a number of Mr. Schaetzer's associates in the essential oil trade.

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A reduction in copra exports from the Dutch East Indies is likely to follow the present tendency to reduce production sharply owing to the low prices prevailing there, according to advices from Batavia.

The freight rate of 66½c per 100 pounds on fish oil from Southport, N. C. to Bayway, N. J., is declared excessive in a complaint filed with the Interstate Commerce Commission by Harvotis Corp., Port Monmouth, N. J.

Registration at 18th Convention

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Diphenyl methan Benzyl acetate	2 Cananga oil
Terpineol	7 Hydroxy-citronellal

James N. Gamble, vice-president of Procter & Gamble Co., acted as honorary chairman of the committee which formally opened the new western Hills viaduct in Cincinnati, January 15.

Belgium has increased its import duty on margarin from 60 to 100 francs per 100 kilos.

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